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INSTRUCTION BOOK

—FOR—

DRAFTING AND CUTTING

DRESSES, BASQUES, SACKS, COATS, ETC.

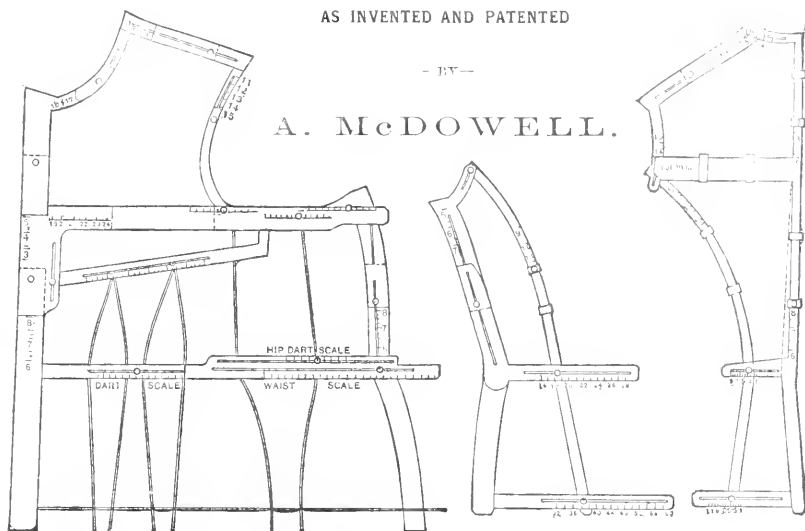
—BY THE—

GARMENT DRAFTING MACHINE

AS INVENTED AND PATENTED

—BY—

A. McDOWELL.



THE McDOWELL GARMENT DRAFTING MACHINE CO.,

No. 6 W. 14TH STREET, NEW YORK, U. S. A.

The Garment Drafting Machine being secured by Letters Patent, all parties found infringing on our rights will be dealt with according to law.

AGENCIES WILL BE GIVEN TO RELIABLE PARTIES.

NOTICE TO DRESSMAKERS AND AGENTS.

Our New Method, supplying a long-felt want, and being accurate in every respect and equally useful to the expert and beginner in the profession of dress-fitting, is naturally creating a revolution in that hitherto difficult art. For, while combining the methods peculiar to the best French and American actual measure systems, it has so thoroughly simplified their use by the introduction of the Garment Drafting Machine (an instrument that effects for the dress fitter what the sewing machine does for the dressmaker) that any one with perfect ease can accomplish work equal to the best performances of Worth or Pingat.

Notwithstanding its recent introduction to the public, this New Method has superseded all those systems that, in their day, were considered perfect, having proven its superiority to them.

Already, wherever known, this New Method is recognized as the standard and stands to-day without a rival in its completeness. As a result many of our pupils are getting as Cutters \$20 to \$35 per week, which fact is an eloquent and conclusive proof of our claims.

Many good cutters still adhere to the old systems, unmindful that our New Method will save four-fifths of their time by preventing mis-fits, and giving immediately to the garments a grace and finish otherwise unattainable.

Many, also, will exercise their old theories to the last, neglectful of the progress of science and art ; so to those alone, who are anxious to keep pace with the times, gain eminence in their profession and establish reputations commanding customers, we heartily commend this machine as the only one meeting every demand, and whose powers and beauties, simplicity and accuracy, actual use will readily demonstrate.

THE FOLLOWING ARE OUR PRICES:

The Brass Machine Instruction Book, Measure Book, Square, Diagram for Setting Machine, Diagram for Measuring, Tracing Wheel, Tape Line and Box, with instructions.....	\$17 50
The Nickel Machine, with instructions, and same outfit.....	20 00

The Prices for Parts of the System are as follows:

Instruction Book without Machine.....	\$3 50
“ “ Second Copy to parties using Machine.....	1 00
Measure Book.....	50
Square.....	50
Box, Cloth Covered.....	50
“	25
Tracing Wheel, Rosewood Handle	40
“ “	25
Tape Measure, Best Satine Stitched.....	40
“ “ Rubber Coated.....	15

A liberal discount to Dressmakers ordering for Apprentices.

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INTRODUCTORY.

The invention of our method of measurement, and the machine to simplify it, are the result of our careful study and experiments with the various systems, charts, etc., in use. We have devoted the last twelve years to investigating this subject, and found that when these charts or systems were used their success was due entirely to the judgment, talent and experience of the party using them, and that the systems themselves proved most indifferent guides, and were only satisfactory when the good sense of the dress fitter detected their mistakes and rectified them. While most of these systems and charts claimed to give actual measures, nine out of ten were merely proportional scales, some on pasteboard and called charts, and others on tapes and squares, called systems.

Each was based on the idea that all forms were perfect and exactly similar, and that, because one lady was straight and fully developed, every lady must be the same, forgetting that ladies' bodies vary as absolutely as their faces, and that to base a system on the measures of any particular figure as a guide would equal the absurdity of selecting a photograph of a beautiful face to represent the features of all mankind.

Some ladies after buying a paper pattern that gives no satisfaction, are surprised that her neighbor, with similar bust and waist measures, procures a pattern that fits her perfectly. Experience only teaches that the old style charts, systems and patterns are inaccurate, and that we have no reliable rule of proportions.

Having arrived at this conclusion years ago, we discarded the old theories, and have since devoted our time to perfecting a method to overcome the objections to the various systems in use, and then, in so simplifying that method that anyone could use it correctly.

Our system of actual measure is the simplest in use, and yet gives the contour of the body, or shape of the lady, more perfectly than any other.

The Garment Drafting Machine is as variable as the measures themselves, and gives to each part of the garment its proper shape, and accomplishing perfectly and simply what the taking of the impression of the form failed to secure.

It requires no guess-work, and almost entirely discards figuring, and enables one to perform five times the work that can be effected with any other system. It also so simplifies the work that a fifteen-year old child can easily learn to fit garments.

This being the only method that can be implicitly relied on for the making of dresses from measure, without refitting the figure, and having the testimonials of many of the best cutters and dressmakers that our country affords, showing its vast superiority for ease and perfection of fit to anything of the kind obtainable elsewhere, we submit it to your consideration with supreme confidence.

An extract from one of our references embraces the whole subject within a very small space: "You have the easiest method to learn and the best to use, and nobody with common sense could be induced to return to a chart, square or patterns."

IMPROVEMENT IN DRESSING.

Within the last few years ladies' dress has been making rapid advancement, not only in the complications used in its construction, but in the art of fitting the figure.

To-day, unless a lady's dress is properly shaped and well made, all the beauty that nature may have bestowed on the figure, or art given, the fabric covering it is considered lost ; and the pleasure she might have given those surrounding her is thrown away.

So ladies' dress has gradually grown in importance, and by the aid of the sewing-machine has become more elaborate and complicated ; indeed, so strong is the desire for variety of design at the present day that no lady will have two dresses made in the same style, or tolerate the idea of wearing a dress similar to one already worn by another.

To-day a lady expects to leave her measure and have her dress sent to her finished and ready for use. She has neither the time nor inclination to submit to experiments in fitting the waist and undergo an hour or two of that old-time torture of disrobed endurance, when, stuck by pins and worried by unceasing questions, she fain would forego the dress and seek a place of peace and comfort.

By inventing this new method, and the machine that simplifies its use, we have obviated all these annoyances.

The system is "actual measure," as fully as that used by our best tailors, and the machine enables us to properly proportion each part according to the measure, and draft it without mistake, thereby securing a fit as good, in all respects, if not better, than if the party were present and the garment had been fitted on her figure.

Dressmaking, then, to-day is an art, and requires taste, cultivation and judgment to follow it successfully, and demands that one should be well acquainted with styles. To accomplish this the most attractive fashion-books should be patronized.

By learning what pleases others a correct taste may be cultivated, and finally, one may develop into a competent judge and authority. What has been done can be done again, and the chances of rising to eminence in any profession always exist.

Let your motto be : Better work and better pay.

CUTTING AND FITTING.

It matters not how much taste is displayed in draping, or how carefully the garment is put together, should the proper style or proportions be absent, it proves a failure.

Therefore the most important part of dressmaking rests in the ability to properly cut the garment.

The beauty of the figure and the style and comfort all depend on the cutter, and the latter must rely on a method as changeable as fashion and as variable as the figure itself, since a perfect result is otherwise impossible.

We felicitate ourselves on the ability to offer you what challenges comparison and stands without an equal in this line.

Ladies are the natural dressmakers, but unfortunately their efforts have been clogged by incorrect methods ; from infancy up they have seen garments made from patterns, and fitted on the form, pinned in here, let out there, etc.; and now time is required to withdraw them from the old paths

where, in comparative darkness, they stumble in a maze of difficulties and lead them into a course clear, beautiful and satisfactory.

The advantages that nature has bestowed on women in the matter of dressmaking is counterbalanced in men by their experience as, or with tailors when fitting from actual measure. Still, there is no reason why women should not excel in dress cutting, their taste being better than the taste of the majority of men in the profession.

Ladies, this new method is intended for you ; it is reduced to the simplest possible form, contains the least amount of figuring, and has brought the possibility of mistakes to the smallest imaginable point ; yet, notwithstanding the fact that it is the "easiest to learn and the best to use," you must understand it, in order to derive the full benefit of its capabilities.

Properly understood, this method will gain you a position that cannot otherwise be attained.

Having mastered this system, you can accomplish that long desired end, viz: to fit from measure, without refitting on the figure.

You will soon grow so expert that you can make dresses, without fitting, superior to those fit on the figure.

You will, also, with the aid of our self-measure diagram, be able to make up garments for parties that you have never seen, and who may be hundreds of miles distant. With it you can also cut patterns, perfectly reliable and certain of giving complete satisfaction.

As long as nature molds the human form, never expect man's guesswork or "ready made patterns" to approach fitting more than one in fifty.

* Perfect yourself in the profession of cutting, and your services will be demanded by both customer and manufacturer. To effect this, practice measuring ; and when failing to fit, discover the mistakes and guard against them in the future. Learn to notice every peculiarity of figure when measuring, and make special notes, if necessary, in your measure book.

Follow our suggestions for peculiarities of figure.

Make yourself familiar with the machine in order that its lines can be changed without altering the fit, should fashion so require.

Draft carefully, for "what is worth doing at all is worth doing well," and a habit of carelessness will thwart all our calculations in fitting.

The next important point is that of making dresses. This subject we will treat under the heading of

HINTS TO DRESSMAKERS.

BASTING AND FINISHING.

One reason why foreign dresses are so admired is the splendid manner in which they are finished.

Proper basting is a very important matter, for if the lining and the outside, although cut properly, are not united correctly the result will not be such as was intended.

Basting them is the foundation of making, and its importance should be generally appreciated in this country. Don't be afraid of using too many stitches.

TO BASTE THE SEPARATE PIECES OF THE LINING TO THE OUTSIDE.

Place the material on the table with the wrong side up, with the wrinkles all nicely smoothed out ; then lay the lining of the front on the goods and baste on the sewing lines, using a stitch about one inch long. Baste down

the fold line evenly to two inches below the point of the bust, from this point to the waist pull the lining about one-quarter of an inch. From there down baste evenly. When basting around the darts, full the lining from one inch below the top of the darts to the waist line about one-quarter of an inch; continue from the waist down plain.

The goods and the lining are basted evenly under the arm, from the armhole down, except for the three inches just above the waist, the lining is to be full a little. The lining on the shoulder is full slightly. Lay the lining of the back and the side body properly on the material and baste in the sewing lines evenly except for the three inches above the waist line, the lining is to be slightly full in these three inches, say one-quarter inch. Below the waist baste evenly.

TO BASTE THE SEAMS.

Begin one quarter of an inch above the top of the front darts and baste evenly to the waist line, and continue from there down. When the second dart slants very much, it will be necessary to full the edge next to the front slightly down as far as the waist. The hip dart is basted evenly from the armhole to the waist; from there down the edge next to the front is full slightly for three inches, then plain. In joining the sidebody to the back, begin at the armhole, baste evenly for two inches and then full the back slightly for the next three inches; from there down baste evenly. Always hold the back towards you when basting. Baste the side seam evenly, beginning at the armhole. In joining the front and back at the shoulder, full the back and stretch the seam after basting.

To prevent the armhole from stretching, use a strong thread or cord around it when basting. Having properly basted the garment, stitch the seams exactly on the sewing lines. This must be done very carefully. Press the front darts into shape by drawing them over the knee, then press all the seams and stay the edges, first trim slightly and then overseam the edges separately. For a better finish bind each edge inside with silk binding. All dresses should be finished with an inside belt, which must be fastened on each seam, thus relieving the goods of the waist strain. The casing for the whalebones in cheap dresses can be made out of the seams, but for good dresses it is best to press the seams open and then cover the whalebone with a piece of the lining, cut bias and nicely felled on, or with a piece of tape. The whalebone must be of good quality and thin at the ends. Clipping the seams is necessary, to have the goods lay smoothly. Never trim the shoulder and side seams too closely. For fleshy figures, particularly those that break open the seams, cut the lining crosswise when the material will permit, that is, have the selvedge top and bottom. Some good cutters always cut their linings this way, but the majority cut the lining lengthwise, the same as the outside. Never allow a customer to put her thumb into the armhole when fitting the dress, as she will thereby stretch the armhole and cause a fullness in the front of the arm very hard to remedy.

Learn to make garments well, and induce your customers, if possible, to wear becoming styles and colors. As a rule, rich trimming should accompany rich material, and colors should invariably harmonize.

Study these points, and when seeking a position as forelady, or cutter, and fitter, your value will be greatly enhanced.

If you would become an expert, and we hope that such is your aim, you can command your own price.

HOW TO TAKE THE MEASURE.

Remember that a perfect-fitting garment can only be produced by first securing a perfect measure. Before beginning to take a measure always place a belt of stiff material, two inches wide, tightly around the waist, and see that its lower edge is just at the bottom of the waist—not crowded down too much, nor pushed up by the skirts rolled on the band. Have the lower edge just at the natural waist.

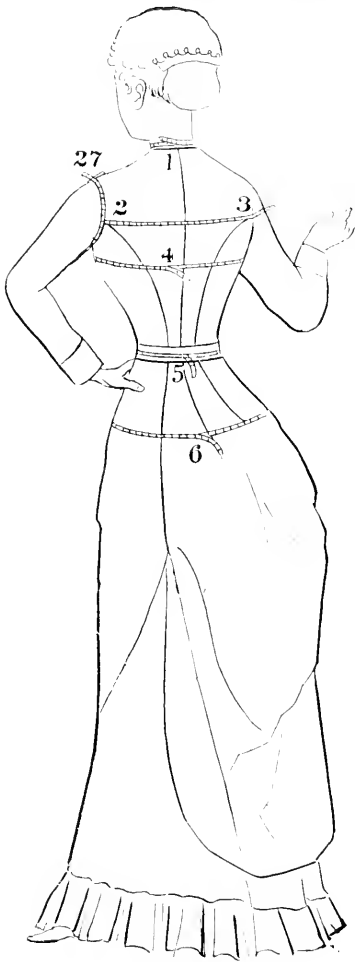


Fig. 1.

FIRST.—The *neck* measure is taken (while standing at the back) just above the band of the dress, around the bare neck, snug, not loose. Do not allow anything for comfort; the machine does that. This measure is shown at 1 on Fig. 1.

SECOND.—The *width of back* is taken with the tape across the shoulder-blades between the arm-holes, and is to be just the width you desire the garment to be when finished, as the machine allows for the seams. This measure is shown by line from 2 to 3 on Fig. 1.

This measure can also be taken by using the square as shown on Fig. 4, from 21 to 22. To use the square, place its short end under the left arm, and slide up the *gauge* on the long part until it touches the body under the right arm. The figures on the square at the side of the gauge that touches the body, give the correct measure.

THIRD.—The *underarm length* is taken with the open hand resting on the hip, one inch below the belt, as shown in Fig. 2. Take the end of the tape between the thumb and first finger of the right hand, and pass it under the arm with the second joint of the thumb touching the arm, keeping the thumb and finger straight through, neither pointing up nor down.

Then with the left hand bring the tape to the lower edge of the belt. Hold it there with the left hand and draw back the right hand, and if the knuckles just touch the arm, with the tape stretched, it will give the correct measure. This measure is shown on Fig. 2, from 12 to 13. Always measure both sides.

You can use the square in testing this measure as shown in Fig. 5, from 25 to 26. Care must be used not to use too long a measure, by pressing the gauge into the arm.

Place the short part of the square upon the hip at the lower edge of the belt, with the long part running straight up, touching the back of the arm at

the shoulder. Then slide up the gauge on the long part until it just touches the arm close to the body. Don't let the thin edge crowd up into the arm. The figures on the long part (on the side of the gauge where it touches the arm) will give the correct measure.

FOURTH.—*The length of the back* is obtained by measuring from a point *one inch above* the prominent bone in the back of the neck, to the lower edge of the belt, *and no further*; as shown in Fig. 3, from 14 to 15.

Caution.—When the back is hollow and you wish to extend it below the lower edge of the belt, then mark the length you wish to add to the back below the belt, opposite the next to the last interrogatory on your measure book, which reads thus: *Is the back hollow below the belt?* Here you would mark $\frac{1}{4}$ or $\frac{1}{2}$ an inch, as required. This extension of the back below the lower edge of the belt is provided for when setting the machine; full instructions for which are given in the instruction-book under the head of "How to set the Machine."

Another way for measuring the length of back, well adapted for use with the Drafting Machine, and especially for irregular forms, is as follows:

First, when measuring the width of back with the square, as shown in Fig. 4, with a piece of tailors' chalk make a mark in the center of the back just at the upper edge of the square. Then measure from the point of the neck down to this mark for the upper part of the back, and from the mark down to lower edge of belt for the lower part of the back, placing the figures for each part in the measure-book, for which you will see separate spaces provided. The square should always be straight across the back, with the short piece close up under the arm and straight through, pointing neither up nor down, when you make the chalk mark.

FIFTH.—*The arm-hole* is measured at the shoulder, where the sleeve is to join the body. Have the hand resting on the hip and measure the arm rather tight, as the arm-hole gets larger while making up. The place to measure is shown on Fig. 1, at 27.

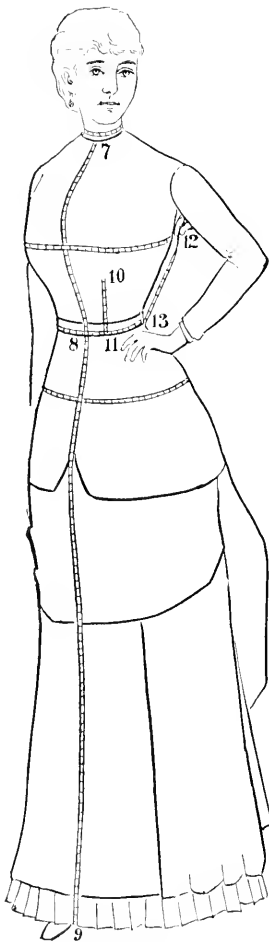


Fig. 2.

SIXTH.—*The length of shoulder* is measured from the neck to the arm-hole, as shown on Fig. 4, from 28 to 29. It is measured just back of the shoulder on the shoulder seam. The machine allows for the seam. It is not necessary to take this measure unless the shoulder is very long or short. It is useful for a fleshy figure.

SEVENTH.—*The length of front*: Place the end of the tape line at the top of the breast-bone at lower part of the neck, and measure down to the

lower edge of the belt at the waist, as shown in Fig. 2, from 7 to 8. This will give a dress of medium height at the neck. If you desire it to be higher than medium you should place the end of the tape a little higher than the top of the breast-bone, and use a very tight neck measure.

Caution.—Never measure below the lower edge of the belt for the front. When you desire to extend the front below the belt, it must be done by changing the machine after it has first been properly set at the correct measure as taken.

Instructions for shortening or lengthening the front for peculiar figures are given under the head of "How to Set the Machine."

EIGHTH.—*Height of front darts:* The height of the darts are obtained by measuring from a little below the point of the bust to the lower edge of the belt, as shown in Fig. 2, from 10 to 11. Measure for the *first dart only*, being careful not to start *too high up*. Darts should be measured too short rather than too long.

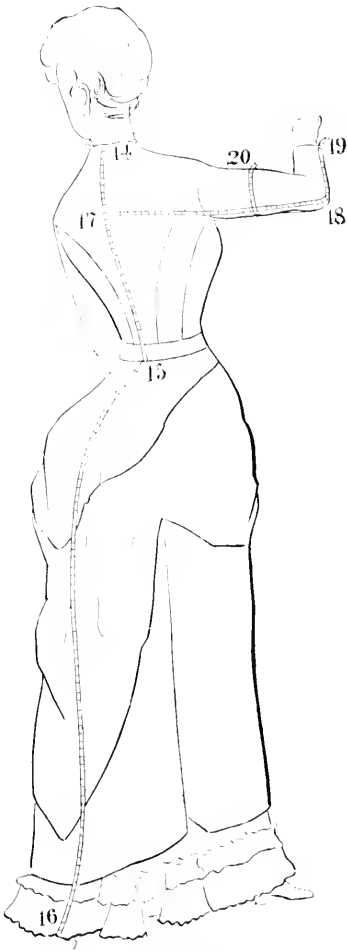


Fig. 3.

NINTH.—*The bust measure* is taken over the fullest part of the bust, not above it, close up under the arm and across the shoulder-blades, keeping up a little on the back, as shown in front in Fig. 2, and at back in Fig. 1 at 1. It is best to take this measure while standing at the back, and always ascertain whether the same or a corsage of a similar bust formation is to be worn with the new garments.

TENTH.—*The waist measure* is taken with the belt removed and medium tight, as shown in Fig. 1 at 5. Stand at the back while taking this measure.

ELEVENTH.—*The hip measure* is taken *six inches* below the waist, around over the hips, rather loosely, as shown in Fig. 1 at 6. The quantity of clothing and drapery must be considered when taking this measure. It is best taken when standing at the back.

TWELFTH.—*Sizes of front darts.* For *very small* stomach, mark 9; for *small*, 10; for *medium*, 11; for *large*, 12; for *very large*, 13. When setting the machine, use two sizes less for princess or polonaise.

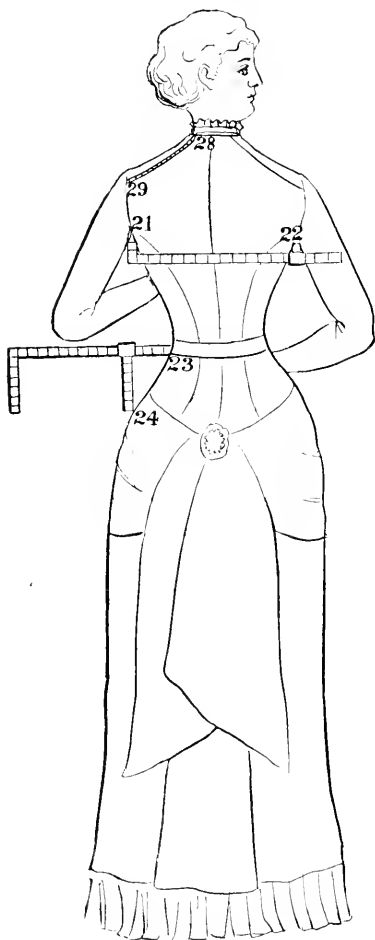
THIRTEENTH.—*The hip dart.* The hip dart is graded as follows:

Very small, 6; small, 8; medium, 9; large, 10; and very large, 12. When using the sizes, you notice the hip, and place such a figure

in the measure-book as indicates the size, or measure with the square as follows :

To measure the hip dart with the square, take the square in the left hand, with the short arm and gauge hanging down, and place the end of the long arm marked *A*, against the belt, having the lower edge of the square even with the lower edge of the belt. Then move the gauge up towards the body until its lower end or point just touches the hip. The figures at the edge of the gauge nearest the body, on the *hip dart scale*, is the correct size. The position of the square when taking this measure is shown in Fig. 4 at 23 and 24.

FOURTEENTH.—*The sleeve.* The length is taken with the arm raised to a horizontal position and bent at a right angle, measuring from the center of the back to the elbow for one measure, and to the prominent bone of the wrist for full length of the sleeve, as shown in Fig. 3, from 17 to 18 and 19. One half the width of the back to be deducted from each measure.



For tight sleeves, measure around the upper part of the arm near the shoulder as shown in Fig. 3 at 20, and also measure around the arm at the elbow and at the wrist.

Sleeve length to elbow
 To wrist
 Around the arm, *upper* part
 Around the Elbow
 Around the Wrist.....

FIFTEENTH.—*The length of skirt* is measured from the lower edge of the belt to the bottom of the skirt at front, side and back, as shown in Fig. 2, from 8 to 9, and on Fig. 3, from 15 to 16.

Length of skirt:
 Front.....
 Side
 Back

Fig. 4.

QUESTIONS TO BE ANSWERED.

At what point above the waist is the back the fullest? Is it $\frac{1}{3}$, $\frac{1}{2}$, or $\frac{3}{4}$ the way up between the waist and the neck?

Answer

Is the back very round or nearly straight?

Answer

Is the back hollow at the point where the sleeve joins the body? and will it need to be fitted or padded at that point?

Answer

Is the back hollow below the belt? If so, how much, $\frac{1}{4}$ or $\frac{1}{2}$ inch?

Answer

Do you wish the back extended down, or do you wish to fill up to the belt with a bustle?

Answer

Is the stomach high? That is, does the belt slant up in front, instead of going straight around the body?

Answer

Is the stomach small, medium or large?

Answer

If one shoulder or hip is higher or larger than the other, please notice it; also any other peculiarity of figure.

Answer

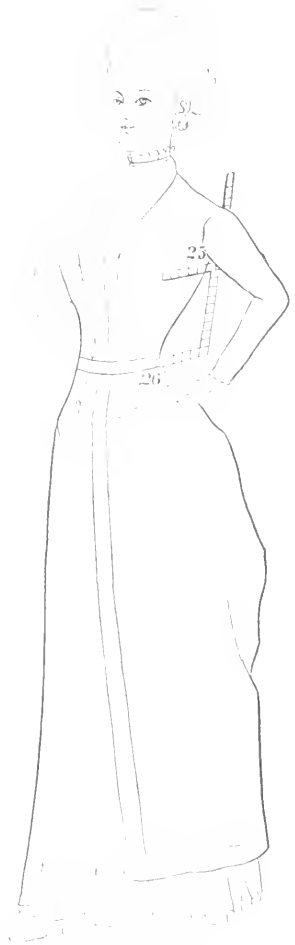


Fig. 5.

When taking the measure for a garment, strive for exactness.

When using the *Square* in taking measures, be sure that the gauge is placed upon the long arm *right side up*; that is, so that the **A** on the clip of the gauge will be on the same side as the **A** on the end of the square.

When using the square and gauge, hold the square in the *left hand*, and move the gauge with the *right hand*, placing the thumb partially upon the gauge and partially upon the square, so as to prevent its moving until you have read the measure from the square.

For marking all straight lines, remove the gauge and use the square

TO MAKE A LONG OR SHORT WAIST.

The best result is always attained when the lower edge of the belt is at the natural waist. If you wish to lengthen the waist, crowd the belt down, and this will give an increased underarm length. If you wish to shorten the waist, place the lower edge of the belt at the point where you wish the waist to terminate. Or, in other words, for a long waist use a long underarm measure, and for a short waist use a short underarm measure.

RESULTS OF BAD MEASURING AND SUGGESTIONS FOR REMEDYING THE DEFECTS ARISING THEREFROM.

REMEMBER THAT AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE,
THEREFORE BE CAREFUL TO MEASURE CORRECTLY.

When the bust measure is too large there will be a fullness under the arms or in the back. Take up at the side seam.

When the bust measure is too tight, add goods at the side seam. If the buttonholes are not made add some down the front line.

When the back measure is too wide, take up the centre seam of the back and add to the front down the front line, or if the buttonholes are made you might trim out the armhole at the back a trifle, and increase the size of the sleeve at the armhole accordingly.

When the back measure is too narrow, the front will be wide and there will be fullness in front of the arms. Give what goods you can in the centre seam of the back. Take up the front on the fold line, and trim the armholes in front.

When the armhole measure is too large there will be fullness back of the arm. Take up at the shoulder seam back of the arm.

When the armhole measure is too tight it will bind over the arm, and draw the goods up from the hip. Let out the shoulder seam back of the arm.

When the length of back measure is too long the garment will be too high back of the neck. Take up the shoulder seams and trim the neck.

When the length of back is too short the garment will bind each side of the neck and be short at the waist on the back. Loosen the shoulder seams and drop the back down to its place. This will make it low at the back of the neck. Piece the lining, and if the goods are cut, hide the piecing by trimming, or with fancy collar.

When the front measure is too long it will be too high in front at the neck, and too loose on the shoulders at the neck. Take up the shoulder seams and cut out the neck and front.

When the neck measure is too large it also will cause a looseness on the shoulder near the neck. Take up the shoulder seam.

When the front measure is too short the garment will be low in front of the neck and be tight or bind on each side thereof. Loosen the shoulder seams.

When the neck measure is too tight it also will bind back of the neck, but will not be low in front. Loosen the shoulder seams.

When the underarm measure is too long the garment will be too low at the neck, tight on the shoulders near the neck and extended down at the waist so as to cause wrinkles. Loosen the shoulder seams and draw the garment up to its place. Fit on the shoulders, and trim out the armhole under the arm.

When the underarm measure is too short the garment will be too high at the neck and short-waisted. Loosen the shoulder seams, and drop down until right at the waist.

When the waist measure is too large the back will be loose. Take up the side seam.

When the waist measure is too tight add goods at the side seam.

Don't mistake the hip dart seam for the underarm seam in making alterations.

When the hip measure is too tight the skirt will ride up and wrinkle at the waist. Add goods at the side seam, and if more are required, at the fold line in front, and at the center seam of the back.

If the hip dart is too small it also will cause the skirt to ride up and wrinkle at the waist. Add goods at the side seam, or take up the hip dart at waist, if possible.

Three things cause wrinkles at the waist, the underarm length being too long, the hip dart being too small, or the skirt measure over the hips too tight. Ascertain which of these causes the difficulty, and remedy as suggested. The safest course while learning, is to take a loose hip measure.

Bad basting may cause wrinkles anywhere in a garment. In fact the most perfect garment can be so distorted by putting it together that it will be spoiled. Learn to baste. See HINTS TO DRESSMAKERS.

SAMPLE MEASURE.

THIS MEASURE IS USED FOR PRACTICE THROUGHOUT THE BOOK.

	Inches.
Neck.....	13
Width of back.....	13
Length of back.....	16 $\frac{1}{4}$
Underarm Length.....	8
Armhole.....	15
Shoulder Length.....	6
Front Length.....	13 $\frac{1}{2}$
Front dart hight.....	5
Bust measure.....	37
Waist measure.....	24
Hip measure.....	41
Size of front darts.....	12
Size of hip dart.....	9
Length of skirt, front.....	38
“ “ side.....	38 $\frac{1}{2}$
“ “ back.....	39

Sleeve length to elbow, 18 $\frac{1}{2}$; to wrist, 27 $\frac{1}{2}$; less one-half width of back,6 $\frac{1}{2}$ inches ; leaves length of sleeve to elbow, 12 ; and to wrist, 21.Sleeve width, upper part, 12 ; Elbow, 11 $\frac{1}{2}$; wrist, 8.

Always answer the following questions in your measure book, as certain changes in drafting depend on them.

Is the back round or hollow ? If so, how far above the waist ?

Do the shoulder points drop to the front ? That is, must you fit back of the arm, where the sleeve joins the back, or at the top of the side seam.

Is the back hollow below the belt, and if so, how much ? $\frac{1}{4}$, or $\frac{1}{2}$ inch ? ...

Is the stomach high ?

TO USE THE DRAFTING MACHINE.

Apply the several measures taken each to the part arranged for it. The words stamped along the several scales on the machine indicate the measures you are to take from your measure book for setting that part.

ALWAYS SET THE MACHINE IN THE FOLLOWING ORDER :

*First, set the BACK.**Second, set the SIDE-BODY.**Third, set the FRONT.*

The figures on cuts No. 6, 7 and 8, represent the order in which the machine is to be arranged. Looking at cut 6, we find (1) at the armhole ; this indicates that this is the first part of the back to be set. We find in our measure for practice that the armhole is (15), so we set this part of the machine at (15).

Next set the part marked (2) which is the width of back, to the measure given which is (13), and then set the parts marked 3, 4, 5, 6, 7, and 8, in the order named to their several measures, as given.

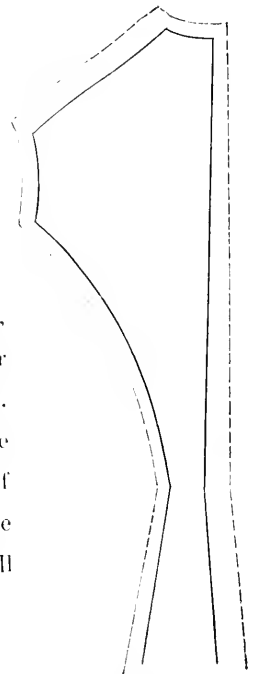
In the following instructions, the figures on the *left* side correspond with the figures on the cut, and represent the order of setting the different parts of the machine, and the figures on the right of the instructions are taken from the sample measure, and are to be found in the scales on the machine.

THE BACK.		Sample Measure
1st.	Set 1, the armhole, to the measure-----	(15)
2nd.	Set 2, the width of back, to the measure	(13)
3rd.	Set 3, the lower part of length of back, to the underarm length-----	(8)
4th.	Set 4, the upper part of length of back, by the length of back measure less underarm length. Thus : length of back $16\frac{1}{4}$, less underarm length 8, leaves $8\frac{1}{4}$ for upper back length-----	($8\frac{1}{4}$)
5th.	Set 5, the neck, to neck measure-----	(13)
6th.	Set 6, the shoulder, so as to bring the point of the armhole marked A on the diagram directly over the point marked B, for medium style. If the shoulder is very long or short, then measure for shoulder and set at measure-----	(6)
7th.	Set 7, the back of a waist, according to fashion, wide or narrow. Place the centre of screw at size 3 for medium or a 24 waist-----	(3)

Fig. 6.

- 8th. Set 8, the skirt of back by placing the centre of screw at the same figures that you used at the waist above. That is, if you set at 3 at the waist, also set at 3 for the skirt ----- (3)

To Mark the Back.—Mark outside for cutting, and inside for the sewing lines, and at the lower edge of cross-piece at the waist for the waist line. To get the hollow of the back, mark a line from the wide seam line at waist line, up to the full point of the back opposite B, thus gradually deepening the seam from that point down to the waist. This will give us Fig. 7.

**Fig. 7.**

THE SIDE BODY.

That part of the side body which joins the back is set first.

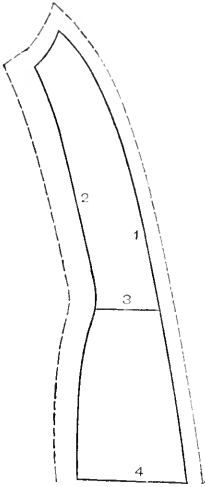


Fig. 8.

- 1st. Set 1, the circle of side body, at the same figures as you will find on the circle of the back designated by figure 9, on cut 6, diagram of back in this case, it is— (11½)
- 2nd. Set 2, the side seam, by the underarm length..... (8)
- 3rd. Set 3, the waist, at the waist measure, less the number of sizes used on the back at the waist. Thus: waist 24, less 3 used in the back, leaves 21, which is the number to use here.... (21)

Remember the number of fashion sizes used on the back at the waist, must come off the side body at the waist

- 4th. Set 4, the skirt, at the hip measure, less the number of sizes used in the skirt on the back. Thus: hip measure 41, less 3, the number used on the back, leaves 38..... (38)

To Mark the Side Body.—Mark outside for cutting, and inside for sewing lines, and at the lower side of cross-piece at waist for the waistline. We then get Fig. 9.

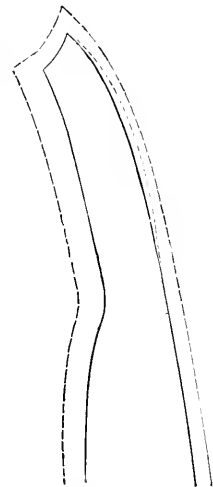


Fig. 9.

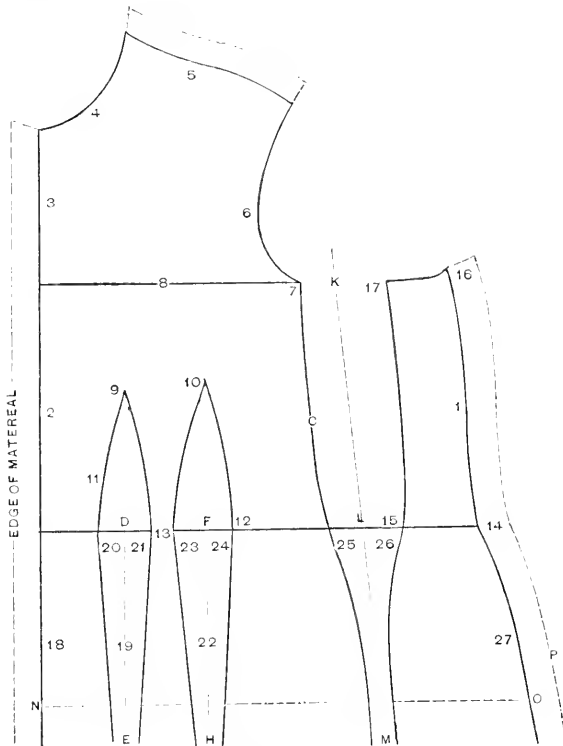
THE FRONT.

Sample
Number.

Always set that part of the front which joins the side body first.

- 1st. Set 1, the side seam, at the underarm length..... (8)
- 2nd. Set 2, the length of front, lower part, at underarm length..... (8)
- 3rd. Set 3, the length of front upper part, at the length of front less the underarm length. Thus: length of front 13½, less underarm length 8, leaves 5½..... (5½)
- 4th. Set 4, the neck, at measure..... (13)
- 5th. Set 5, the shoulder, to same figure as indicated on the shoulder of the back..... (6)
- 6th. Set 6, the armhole, upper part, at the measure..... (15)
- 7th. Set 7, the armhole, under part, to the same measure..... (15)

- 8th. Set 8, the width of front, to the bust measure, less width of back. Thus : bust measure 37, less 13, width of back, leaves 24 for width of front..... (24)
- 9th. Set 9, top of the first dart, at $2\frac{1}{2}$ for medium..... (2 $\frac{1}{2}$)
- 10th. Set 10, top of the second dart, at $5\frac{1}{4}$ for medium..... (5 $\frac{1}{4}$)
- 11th. Set 11, height of dart, at medium, or according to measure..... (5)
- 12th. Set 12, size of front darts at waist, to the measure, or at 12 for medium..... (12)

**Fig. 10.**

- 13th. Set 13 so as to make the second dart a little larger than the first, between the figures 4 and 5 for medium, unless otherwise desired..... (4 to 5)
- 14th. Set 14, the waist size, at the waist measure, unless you use the hip dart. If the hip dart is to be used, then add to the waist measure the number representing the size of hip dart, and set at that figure. Thus : size of waist 24, hip dart 9, making 33, over which number fasten the centre of screws..... (33)
- 15th. Set 15, the bottom of the hip dart, by first moving the left side of the hip dart marked C, so it will be nearly perpendicular, the bottom slanting slightly to the right ; then move the centre of the screw in the right side to the figure representing the size of the dart and fasten it there..... (9)
- 16th. Set 16, the top of side seam, so as to bring this line nearly perpendicular, the top slanting perceptibly to the left or front, as shown in the diagram..... (8)

- 17th. Set 17, the top of hip dart, at the same figure on its scale as the centre of the screw of the top of the side seam (just set) is at, on its scale----- (8)

TO MARK THE FRONT.

To draft the garment begin with the front. To mark the front lay the front edge of the machine even with the edge of the paper or lining, at the distance from the bottom that is desired for the length of the skirt. Then begin at the waist line and draw a line along the inner edge of the wide slot to the neck. This gives the fold line.

Then begin at the edge and mark around the outside for the *neck*, *shoulder*, *armhole* and *side seam*, down to the waist line. Then mark the inner edge of the shoulder and the inner edge of the side seam for sewing lines. Then mark from side seam along the lower edge of the machine to the front, for the waist line.

Then mark the dart nearest the front, so as to bring it to a point at the top. Then mark the second dart same as the first. Then mark on the inside edges of the hip dart pieces for sewing lines of hip dart, extending the lines to the ends of the pieces below the waist line, so that they will curve towards each other.

All dart marks are sewing lines.

THE FRONT SKIRT.

To add the skirt or continue the front below the waist line : First extend the fold or front line, 18, straight down to the bottom of the basque ; then draw line 19, from D, at centre of first dart at waist line straight down or with the grain of the lining to the bottom of the basque at E. Mark lines 20 and 21 so as to extend the dart from the waist line down to bottom of basque, so as to have the lines 20 and 21 one-third of an inch from line 19 at E. This is allowed for the seam. Mark the second dart same as first, as shown on the diagram and Fig. 10.

To extend the third, or hip dart, mark a line through the centre of the hip dart from K, at armhole, through L, at waist line, to M, at bottom of basque. *This gives a line when the hip dart is properly set that will always slant to the right.* Then make a small cross each side of the line at M, one third of an inch distant therefrom. Then, using the outer edge of the wide piece of the side body to give the proper curve, place it top up, and draw line 25. Then turn the side body over, with the screws down, and mark line 26.

To get the proper spring for line 27, find the width of the front as given in the *skirt table for basques*, opposite the hip measure, measure on the hip line (*which is six inches below the waist line*) from N, on line 18, to O, on line 27, the length given in the table, *always omitting* the spaces occupied by the darts. Measure this width with the tape, beginning at N, on line 18, measure to line 20, then move the tape along to line 21, and measure to line 23 ; again move over to line 24, and continue the measure to line 25, and still again move over to line 26, and complete the hip measure for the front, which for 44 hip measure is 15. This gives the correct position for point O.

Then, using the same part of the side body as was used in marking line 25, place the point of the wide piece of side body at the end of waist line, at 14, Fig. 10, with the outer edge passing through point at O, and mark along this edge from the waist line to bottom of basque, and this will give line 27. Then mark on the inner edge for cutting line as shown by the dotted line, P.

This gives us the regular three dart front with a skirt up to eight inches in length, which is the one most used.

The dotted line R in Fig. 11, shows the curve or swell front.

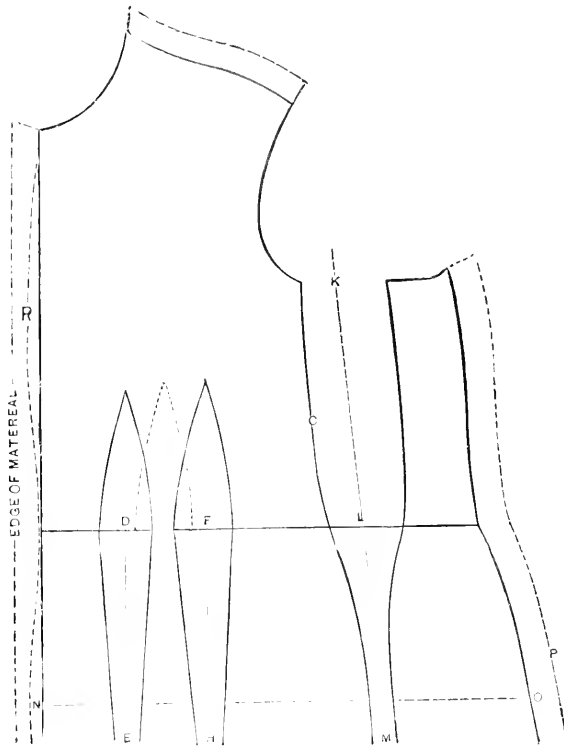


Fig. 11

A HALF TIGHT FRONT.

To draft a half tight front set the machine the same as for the regular three dart front, and mark all parts the same, except the *two front darts, which are not to be marked, and are not to be taken out.* Leaving the goods in at this point gives the half tight front.

You need not add anything to the waist size as you get looseness enough by not taking out the two front darts.

Loose sacques and wrappers can be made on this plan.

A THREE-QUARTER TIGHT FRONT.

To make a three-quarter tight front set the machine the same as for the regular three dart front as instructed on page 17, and mark the same as there instructed, except the two front darts. Then move the machine to the left so that the second dart is half way between the hip dart and the

fold line, or between where the first and second dart would be if marked. Then mark the second dart. The position of this dart is shown by the dotted line on Fig. 11. This dart is extended below the waist as usual.

Skirt Rule for Basque, &c., 6 Inches below the Waist Line.

FIND IN THIS COLUMN THE HIP MEASURE.	WIDTH OF FRONT WHEN FINISHED. SEAMS AND DARTS NOT INCLUDED.	WIDTH OF SIDE BODY AND BACK.
35	$12\frac{3}{4}$	$5\frac{3}{4}$
36	$13\frac{1}{4}$	$5\frac{3}{4}$
37	$13\frac{1}{2}$	6
38	$13\frac{3}{4}$	$6\frac{1}{4}$
39	$14\frac{1}{4}$	$6\frac{1}{4}$
40	$14\frac{1}{2}$	$6\frac{1}{2}$
41	$14\frac{3}{4}$	$6\frac{1}{2}$
42	$15\frac{1}{4}$	$6\frac{3}{4}$
43	$15\frac{1}{2}$	7
44	$15\frac{3}{4}$	$7\frac{1}{4}$
45	$16\frac{1}{4}$	$7\frac{1}{4}$
46	$16\frac{1}{2}$	$7\frac{1}{2}$
47	$16\frac{3}{4}$	$7\frac{3}{4}$
48	$17\frac{1}{4}$	$7\frac{3}{4}$
49	$17\frac{1}{2}$	8
50	$17\frac{3}{4}$	$8\frac{1}{4}$
51	$18\frac{1}{4}$	$8\frac{1}{4}$
52	$18\frac{1}{2}$	$8\frac{1}{2}$
53	$18\frac{3}{4}$	$8\frac{3}{4}$
54	$19\frac{1}{4}$	$8\frac{3}{4}$
55	$19\frac{1}{2}$	9
56	$19\frac{3}{4}$	$9\frac{1}{4}$
57	$20\frac{1}{4}$	$9\frac{1}{4}$
58	$20\frac{1}{2}$	$9\frac{1}{2}$
59	$20\frac{3}{4}$	$9\frac{3}{4}$
60	$21\frac{1}{4}$	$9\frac{3}{4}$
62	$21\frac{3}{4}$	10
64	$22\frac{1}{2}$	$10\frac{1}{4}$

The Skirt Width of the Back and Side Body you usually get when you set the Machine from the Hip measure.

CHANGES, EXPLANATIONS AND SUGGESTIONS FOR THE FRONT.

TO EXTEND THE BACK BELOW THE BELT FOR HOLLOW BACKS.

The lower part of length of back, scale 3, in Fig. 6, is extended down one-quarter or one-half inch according to the memoranda made in the measure book at the time of taking the measure in answer to the question "Is the back hollow below the belt?" after the machine has been regularly set.

TO LENGTHEN THE WAIST IN FRONT.

After the machine is all set extend the lower plate of the front (scale 2, Fig. 10), the amount desired, say one-half inch. This is used in crowding the waist down in front.

TO SHORTEN THE WAIST IN FRONT FOR A HIGH STOMACH.

Take off one-quarter or one-half inch from scale 2, at bottom of machine in front Fig. 10, and add the same amount to scale 3, at the top, thus preserving the correct length of front.

DARTS.

In place of using the old rule for regulating the size of darts, which was to take the difference between the waist and bust measures, and which is applicable only to such garments as terminate at the waist, and although the drafting machine enables us to use all systems of darts, we have found it both expedient and necessary to discard it, and adopt in its stead the following method, which enables us to get rid of the fullness at the bottom of the front darts, for princess and polonaise, thus accomplishing a result unattainable by any other method.

Our plan is to grade the front dart as follows : Very small, small, medium, large, and very large. Each one of these sizes is represented by a number, which is placed in the measure book when the measure is taken. Thus, for very small, mark 9, for small, 10, medium, 11, large, 12, and very large, 13.

Our arrangement for fitting the bust does not depend upon the darts, and as the darts extend below the waist, and are important in the fitting of a princess or polonaise, we are governed in determining the size of the darts by the size of the stomach. That is, if the stomach is medium, mark 11 ; if small, mark 10 ; if large, 12 ; very large, 13.

The tops of the front darts can be arranged to suit the prevailing style, or the individual taste of the customer. Generally they are set at the point marked medium on the machine, which is at $2\frac{1}{2}$ for the top of the first dart, and $5\frac{1}{4}$ for the top of the second. They can, however, be drafted in any position, as is explained in detail in a following paragraph.

HOW TO DRAFT THE DARTS IN ANY POSITION.

There are styles and figures which require the position of the darts to be changed from those given on the machine. For example :

When the waist is over 28 inches, the first dart would be too near the front line, and the space between the first and second darts too small. To remedy this, set the machine regularly, as instructed on page 17, and draft as before, all except the darts. Then, if the front dart is too near the front line, move the machine to the right from $\frac{1}{4}$ to $\frac{1}{2}$ an inch, as desired. Mark the first dart, then move the machine $\frac{1}{4}$ inch more to the right and mark the second dart. This places the first dart farther from the edge and the darts farther apart. The hip dart can be moved in the same way when desired, without changing the fit. By moving the machine you can make the darts higher or lower than the machine gives them, if you so desire.

THE HIP DART.

This dart is entirely independent of the front darts, and is large or small, as the hip is large or small. The sizes on the machine range from 6 to 12. Always keep the hip dart slanting slightly to the right at the waist, or the dart below the waist line will come too far to the front. If the underarm piece between the hip dart and the side seam is too narrow, mark all the front, except the hip dart. Then move the machine slightly to the left, say about one-half inch, or as much as may be desired, and then mark the hip dart. Always be careful, when moving the machine, to change the position of this or any other dart, *to keep the waist line straight*, otherwise the darts will not have the proper slant.

HOW TO LEAVE THE HIP DART OUT.

Set the machine as instructed on page 17 for the three dart front. Shove the bottom of the hip dart (marked 15, on Fig. 10), to the left out of the way. Set the screw at the bottom of the side seam (numbered 14, in Fig. 10) at the waist size. That is, add nothing at the waist or armhole for hip dart, but place the screw at the top of the side seam (numbered 16, in Fig. 10) as far to the left as it will go, that is, to O on the scale.

WHEN THE BUST MEASURE IS TOO LARGE FOR THE MACHINE; OR, HOW TO DRAFT THE FRONT WHEN BUST MEASURE, LESS THE WIDTH OF BACK, EXCEEDS 31 INCHES, WHICH IS THE LIMIT OF SCALE 8, FIG. 10, ACROSS THE FRONT.

If the bust measure is 47, and the width of back 14, this would leave for width of front 33 inches. We open the front of the machine to 31, the limit of its scale, and this will leave two sizes less than the amount desired. These two sizes, equal to 1 inch (a size on this scale being $\frac{1}{2}$ inch), we add to the left of the fold line in front, opposite a point 1 inch above the top of the front dart at the fullest part of the bust. This changes the fold line from a straight to a curved line, as shown by the dotted line R on Fig. 11.

In case you should ever have to draft a front exceeding 33 sizes in width, then allow goods under the arm and at the side seams and a full inch extra down the front. This is obtained by moving the fold line of the machine back to the right from the edge of the goods.

WHEN AND HOW TO USE A CURVED FRONT.

A curved front is used for most figures and is to be preferred on all those with large busts, and is necessary for those that are hollow above the bust, and wherever there is a tendency for the goods to cross or lap at this point.

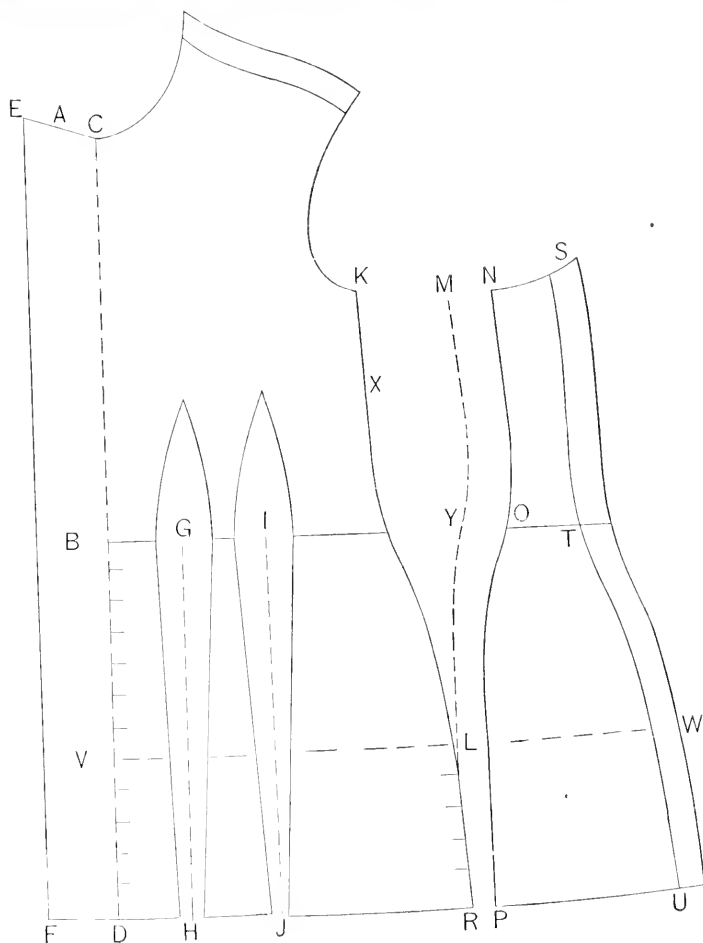
If you wish to use a curved front when setting the machine, take off from the measure for the *width of front* 1 size for medium curve, thus, with the bust measure 37, width of back 13, leaves 24 for the width of front. Instead of setting the machine at 24, set it at 23, thus allowing one size to be added beyond the fold line for the curve. *This is added at a point opposite the fullest part of the bust, which is one inch above the top of the first dart.* To draft this curve, draw a line from this point to the fold line at the neck and to the fold line at the waist. Curve these lines slightly, using the curve of the side body, or with the tracing wheel on the lining.

Use $\frac{1}{2}$ size for a small curve, 1 size for medium, and $1\frac{1}{2}$ to 2 sizes for very large.

HOW TO MAKE A DOUBLE BREASTED FRONT.

After having arranged the machine for the regular front according to the required measure, as instructed on page 17 or the diagram, simply place it on the lining, back from the edge, to allow more goods for lap.

Three inches back from the edge gives a wide lap. Place it nearer or farther from the edge according to the width of the lap desired. In Fig. 12 on next page the center line is the dotted line *C D*. The regular fold line *A B* and the line *E F* shows the width for double lap.

**Fig. 12.**

HOW TO MAKE THE HIP DART ANY SIZE BY SIMPLY MOVING THE MACHINE—AND HOW TO DRAFT THE BASQUE WHEN THE SKIRT IS OVER EIGHT INCHES LONG.

Arrange the machine according to the measure as instructed for the style of front desired. Place the edge as required for single or double-breast, mark the neck, shoulder, armhole, and the left or front side of the hip dart *N* in Fig. 12; also the waist line and the front darts. Before marking the under arm-piece, see how many inches the skirt is longer than seven inches. Thus, if the skirt is 12 inches long, it is 5 inches more than 7. Then move the machine to the right $\frac{1}{4}$ inch for every inch the skirt is more than 7 long. We found the skirt to exceed the 7 by 5 inches. The machine then is to be moved to the right, straight with the waist line, five-quarters or $1\frac{1}{4}$ inches from *Y* to *O* at the hip dart at waist line, and *M* to *N* at the top. Mark the armhole *N S*, the side seam, the waist line and the right side of the hip dart from *N* to *O*.

Extend the skirt as before, carrying the darts to the bottom so that there will be about $\frac{3}{4}$ inch of goods there for seam. Remember that the hip measure is always applied 6 inches below the waist-line, as shown by dotted line *V W*, Fig. 12, and not at the bottom of the basque.

TO MAKE A TIGHT FRONT WITH TWO DARTS, ONE IN FRONT AND ONE UNDER THE ARM.

Set the machine for the three-dart front as directed on page 17. Use curved front generally. Move the top and bottom of the first dart as far to the left as they will go, and fasten the screws there, thus shutting out the front or first dart. Then move the right hand piece of the second dart three sizes to the left; thus, if you had marked the front darts 12, after the change they would stand at 9.

Move the top of the second dart to the left, to about $3\frac{1}{2}$, or so as to give the dart a good shape, as shown in Fig. 13.

When the size of the front darts was changed from 12 to 9, it changed the slant of the side seam, so that the top at the armhole at *L* will need to be brought to the left about 3 sizes so as to give the proper slant to the side seam. This will necessitate the resetting of the top of the hip dart *M*, so that its figure will correspond with that of the side seam *L*.

It may be necessary to move the bottom of the hip dart at *N* slightly to the right to give it the proper slant and keep it back over the hip, but be careful not to change the size of the dart or waist.

Place the machine properly on the goods, and then mark the fold line, neck, shoulder, armhole, side seam, and waist line. Mark the front and hip dart. Curve the front as shown by dotted line *A*, on Fig. 13. The skirt of the front is the same as in Fig. 10, or the regular front, excepting there is but one dart in front instead of two. The same rules apply to drafting this skirt as to the others. Remember that the hip measure in drafting is always applied *six inches* below the waist line and not at the bottom of the basque.

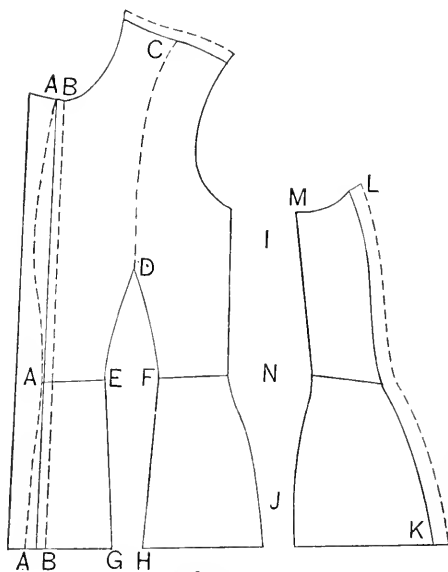


Fig. 13.

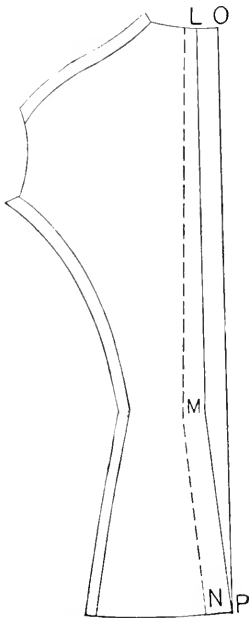
The regular back and side body as described on page 15, can be used with this front.

HOW TO MAKE A SEAM FROM THE TOP OF A DART TO THE SHOULDER.

This is done by extending the dart, as is shown by dotted line *C*, Fig. 13. The line continues straight up from the top of the dart for about three inches, and then curves slightly to the right, and then a straight line to the shoulder, and should reach the shoulder near the center. Sometimes, however, it is carried nearest to the neck. Fashion regulates this. When the front has two darts, the first dart is the one usually extended.

HOW TO MAKE A FRONT WITH TWO DARTS OPEN ON THE BACK.

Set the machine the same as for the regular dart front as directed on page 15, and in measure book. After the machine is all set, shove the first dart, top and bottom, over to the left as far as it will go, thus shutting it out. Then move the right-hand piece of the second dart three sizes to the left. Thus, if you had set the front darts at 10, after the change it would stand at 7. Place the top of the second dart so it will be over the centre. Move the top of the side seam to the left, at the armhole, so that the side seam will have the proper slant, that is, the top slanting about 1 inch to the left. Set the top of the hip dart at the same figure as the top of the side seam.

**Fig. 14.**

Have the bottom of the hip dart so placed that the dart will slant slightly to the right. This will keep the hip dart seam back to its place below the waist. *Do not use a curved front with this style.*

Fold the goods and place the machine upon them, and instead of placing its edge at the edge of the goods as heretofore, move the machine to the left, until you can see the edge of the goods through the slot to the right of the fold line, which is the narrow slot in which the screws are placed. *This is the centre line of the front, shown by B B, Fig. 13.* When the machine is thus placed on the goods, mark as before, and also extend the skirt as usual.

We have you fold the goods, because you desire to have no seam in front. The object of moving the machine to the left before marking, is to get rid of the goods that the machine allows for fold, and lap in the usual style of open front.

TO RAISE THE SHOULDER SEAM AT THE ARMHOLE.

To give a square shouldered back, add $\frac{1}{4}$ or $\frac{1}{2}$ inch to the armhole of the back, and take off the front armhole the same amount.

WHEN THE SHOULDER BLADE IS PROMINENT, AND THERE IS HOLLOW PLACE BACK OF THE ARM THAT NEEDS FITTING.

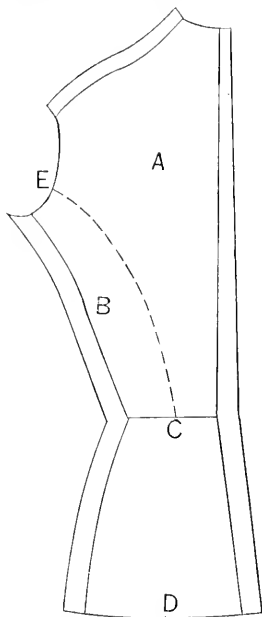
Draft the side body as usual, and with a wheel curve the top of the sewing line of the circle in at the top $\frac{1}{4}$ inch, or more if required, starting about 3 inches below the top.

BACKS OF VARIOUS KINDS.**BACK OPEN UP THE CENTRE, TO GO WITH THE FRONT JUST DESCRIBED.**

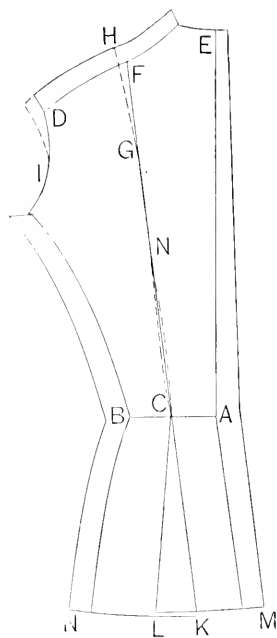
The back and side body for this front are set and drafted the same as usual, except that the cutting line down the centre of the back, shown by *L M*, Fig. 14, becomes the fold line, and goods must be allowed to the right of this line, for fold or lap—say about $1\frac{1}{4}$ inches—as shown by line *O P*, Fig. 14. This completes a garment open at the back.

HOW TO MAKE A SACQUE BACK.

Arrange the back and side body as usual, as shown on page 15, and in measure book, and mark both the cutting and sewing lines of the back, except the circles where it joins the side body. Then dot the *sewing line* of the circle, 2 inches from the arm-hole towards the waist, and dot the *sewing line* at the waist. Next place the side body so that its *sewing line* will be over the dotted sewing line of the back, at *E*, the arm-hole, and at *C*, the waist, as shown in Fig. 15, taking care to have the arm-hole at *E* and the waist line at *C* in place.

**Fig. 15.**

Continue the side seam for the skirt as shown in Fig. 15. This back is simply the regular back *A* and side body *B*, as made by the machine, drafted in one piece. Divide the back just below the shoulder into two equal parts at *F'* from the seam line at the armhole to the seam line at the center of the back, just at the neck, as shown from *D* at armhole to *E* at neck in Fig. 16. Then draw a line from *F'* at the shoulder to *C* at the waist. Extend this line straight on to the bottom of the skirt at *K*, for the side body.

**Fig. 16.****HOW TO MAKE A BACK WITH ONE SEAM TO THE SHOULDER.**

Draft the back and side body together as directed in the preceding directions for a sacque back. Place a dot on the waist line $1\frac{1}{2}$ inches to the left of the center line, or at *C*, as shown in Fig. 16. To get the line *C L* for the skirt of the back, place the back of the machine in the same position it occupied when you marked the back, and move it to the left or right straight with the waist line until either the sewing or cutting line comes to the point *C*, then mark down that edge, and it will give you the line *C L*, as shown in Fig. 16.

Next mark the dotted line *H G* at the shoulder, that is, curve the side, back to the left, about $\frac{1}{2}$ inch. In order to keep the shoulder at its proper length, add a piece at the armhole, as shown by the dotted line *I*, equal to the piece cut out in making the curve at *H G*. This gives a better fit back of the arm.

For this back it is best to draft a paper pattern, and cut the back apart on the line *L C F*. The skirt of the side body will require a piece to be added the size of *L C K* to give its proper width. Lay these pieces on the lining and allow a $\frac{1}{2}$ inch for seam where they were cut apart.

The line where the paper was cut is the sewing line. In dividing the back at the waist line, the two pieces may be equal, but the side body must never be narrower than the back.

HOW TO MAKE A BACK WITH SIX PIECES WITH SEAMS TO THE SHOULDER.

Draft the back and side body together as for a sacque back, as shown in Fig. 15. Divide the waist line into *three* equal parts, and also divide the distance from the sewing line of armhole at the shoulder to the sewing line at the center of the back at the neck, into *three* equal parts. Draw straight lines from the divisions at shoulder to the divisions at waist, and extend the skirt as shown in Fig. 16. It will be necessary to draft this on paper and allow one-half inch for seams where the pattern is cut in two.

HOW TO MAKE A BACK IN SIX PIECES WITH ONE STRAIGHT LINE TO THE SHOULDER AND A CURVE TO THE ARMHOLE.

First draft the back and side body together, as shown in Fig. 15. Divide the back at the waist line into *three* equal parts, and at the shoulder into *two* equal parts from the seam at armhole to the seam at center of the back at the neck. Draw a line from dot at shoulder to dot at waist line nearest the center of the back. Extend the skirt below the waist, as shown in Fig. 16. Next, with the circle of the side body, mark a line from that point in the armhole where the seam generally goes one-third of the distance from the top of the side seam to the shoulder, as represented by dot *I* in Fig. 16, to the left hand dot at the waist line. Extend the skirt as shown in Fig. 16.

This gives a back with a curve to the armhole and a straight line to the shoulder, and is called a combination back. It can be used to advantage for fleshy forms.

HOW TO MAKE A FRENCH BACK FOR A FRENCH BASQUE.

This is one where part of the side body is added to the back, and a part to the underarm piece, thus doing away with the regular side seam.

Draft the back and side body, as shown in Fig. 15, so that the sewing lines of the circles of the back and side body will come together at the armhole and waist properly. This gives us the back and side body together, which makes a back wider than is required. To bring it to the proper width we decide, the width we desire, the back to be at the waist when finished, and place a dot on the waist line at that distance from the center seam of the back, as at *C*, in Fig. 17. The piece of the back, to the left of dot, from *C* to *A* is generally about one inch wide. Just as much as you take from the back at the waist line from *C* to *A*, take off from the armhole from *E* to *D*. Then with the circle of the side body draw the line *D C*. By placing the

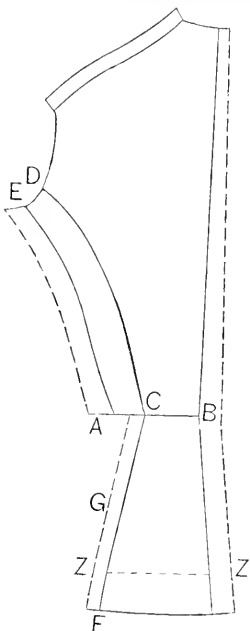


Fig. 17.

waist line of the side body at the waist line **A B**, and the edge of the circle at **D**, a good curve is formed. If you want more curve drop the waist line of the side body below the line **A B**, and for a less curve raise it above.

Extend the skirt below the waist by placing the back of the machine as you have it when you drafted the back. Move the machine to the left straight with the waist line until the left edge of the skirt at the waist comes to **C** on the waist line. Mark the left side of the skirt of the back from **C** down to **E**. This skirt requires a one-half inch more spring than a plain basque at **ZZ**, Fig. 17, six inches below the waist. Now the line **A E** is the regular sewing line of the side body, or, in this case, of the sack back, and **C D** is the sewing line for the French back. The piece between the lines **A E** and **C D** is a part of the waist, but is not used in this back, and must be preserved, as it will be needed to complete the waist. So you can cut this piece out and add it to the side seam of the front as you will be directed in the instructions that follow for the French front.

THE FRENCH FRONT.

For this front we set the machine the same as for the regular three dart front as instructed on page 17 or diagram, using the curved front. Move the *first dart* over to the left, at top and bottom, thus shutting it out. Bring the lower right hand piece of the *second dart* three sizes to the left, place the top at or near $3\frac{1}{2}$ so as to give the dart a good shape, standing about straight, the top slanting slightly to the right. See Fig. 18. Mark the fold line, neck, shoulder, armhole, and the left and front side of the hip dart, also the waist line. Then move the machine *one inch* to the right, keeping the waist line straight. Then mark the right side of the hip dart

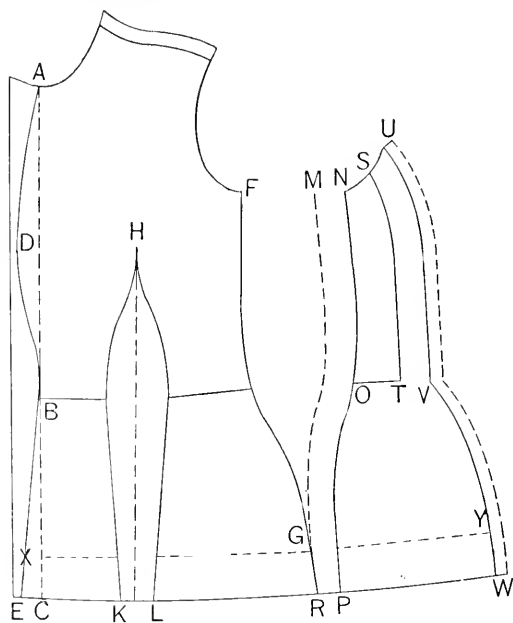


Fig. 18.

N O, balance of the armhole **N S**, and the side seam **S T**. This finishes the marking of the front and makes it complete to the waist line, *except that portion of the sacque back that was not used in making the French back*, just described. This piece of the side body or sacque back that was not used in making the French back needs to be added to the pattern to complete the underarm piece and give the goods required to join the back. It is shown by **S T**, **V U**, Fig. 18. If in making the pattern for the French back you cut the piece off that was not required it is just the size and shape that

you need to add to the underarm piece, and by placing its left hand edge

at the sewing line of the side seam, then marking along its right hand edge, will give the sewing line. Allow 1 inch for seam beyond this.

The line *S T*, Fig. 18, shows the sewing line of the side seam, and from there to the right the piece *S T, U V* is what is added from the back. Generally this piece is *one inch* wide, and its curve is the same as that of the side seam—and as the cutting line of the side seam of the front is one inch deep and has the same curve, we can make the cutting line the sewing line, which adds the piece required, and then add *one inch* for seam. This will give us about the same result as would be obtained by cutting the piece from the back and adding it as above directed, and gives less trouble. Remember, when you *add one inch to the front* as here directed, you must always take a piece of *the same width off the sacque back* to make the French back. Remember to continue the armhole curve on the piece you have added, as shown from *S* to *U*, Fig. 18.

The skirt is added, as follows : The front line is extended straight down for most persons, as shown from *B* to *C*, but those with large stomachs, or above the medium, will require a spring, as shown by line *B E*. The front and hip darts are extended below the waist the same as in any other basque (see Fig. 18). *The hip measure, however, is applied differently.* That is, you need not refer to the table given for skirts of basques, but take the hip measure and apply it as follows :

Take $\frac{1}{2}$ the hip measure, because the pattern is for one side only ; thus, if the hip measure is 40 use 20, and first measure the skirt of the back 6 inches below the waist, from sewing line to sewing line *Z Z*, Fig. 17. Then measure across the front 6 inches below the waist, from *X* to *Y*, beginning at the fold line at *X*, leaving out the darts, and extend the measure to *Y*, to complete the 20 inches, including the back. Thus, if the back is measured $4\frac{1}{2}$ inches, you will require $15\frac{1}{2}$ inches across the front from *X* to *Y*, Fig. 18, or from fold line to sewing line of the side seam, exclusive of the darts. This will give you 20 inches in the back and front when finished.

HOW TO MAKE A PLAITED, GATHERED OR SHIRRED WAIST.

Draft the lining as for the regular basque, as instructed on page 15, or on the diagram.

Then plait, gather or shirr the outside before cutting and sewing in with * or on the lining.

TO MAKE A LOW NECK.

Arrange the machine and draft as for the regular basque. Cut out such parts about the neck, front and back as you wish removed. Remember, that there is no difference in drafting a low neck from the drafting the plain basque. The only difference consists in cutting out around the neck.

TO MAKE A YOKE.

Draft a plain basque. Then cut out as much as desired around the neck, and cut off front, side body and back at a line about *two* inches below the armhole, or shorter, if desired.

THE PRINCESS, POLONAISE, WATER-PROOFS, ULSTERS, ETC.

THE PRINCESS.

Arrange the machine as for a plain basque, as directed on page 15, or in the measure book or chart, and add curved front for all forms except those with very small bust. Set the front darts two sizes less for a Princess than for a basque for the same party; thus, if the front darts are marked 12 in the measure book, set at 10 for a Princess. Divide the darts so that the second is a little larger than the first. Move the top of the side seam to the left so that the top slants about 1 inch towards the front. Change the top of the hip dart piece so that its figure will correspond with the top of the side seam. When the machine is all set mark the cutting and sewing lines for the front.

TO ADD THE SKIRT.

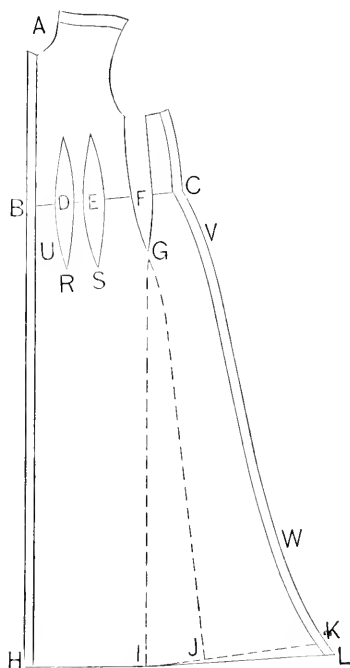


Fig. 19.

Extend the fold line straight down from **B** at the waist to **H** at the bottom, for length of skirt, as shown on figure 19. Add for hem when the bottom is not to be faced. Extend the first dart **D** straight down below the waist line 7 inches, and have the dart come to a point there at **R**. From **R** have the lines extend together further down $\frac{1}{2}$ inch. This will get rid of the fullness at the bottom of the dart.

Make the second dart **E** in the same manner.

The hip dart **F** is drafted the same as for the basque, except that it comes to a point at **G**, 7 inches below the waist line. Extend the lines together $\frac{1}{2}$ inch further to get clear of fullness.

The dotted lines below the hip dart are not often used, only when the goods are very narrow, and then as described hereafter.

Six inches below the waist line, on the fold line, dot at **U**. From this point measure across to **V**, on the sewing line of the side seam 6 inches below the waist line, the number of inches as given in the skirt table for basque, on page 20 or in the measure book, opposite the hip measure. Thus, if the hip measure is 41, the table gives you for width of front at this point $14\frac{3}{4}$ inches. This is the width required when finished. Therefore in making this measure, the darts must not be measured, as they are not included.

The side seam below the waist for line **C V**, is drafted as usual. Always have it spring slightly to the right below the waist, and if the measure taken from the table does not make it curve to the right, add enough to cause it to do so.

Next decide how wide the bottom of the skirt is to be at the floor line. Is it to be more or less than *three yards*? For a lady that measures 41 inches around the hips, $2\frac{1}{2}$ yards at the floor would be medium. If, then, we wish the garment to be $2\frac{1}{2}$ yards at the floor line, we refer to the table

for Princess skirts on page 32, also found in the measure book; find $2\frac{1}{2}$ yards in the first column. Opposite, in the second column, you will find 27 inches, which is the width of the front at the floor, which gives the distance from *H* to *K*, Fig. 19. Measure the length of the side seam from *C*, at the waist, on down to *K*, the length of the skirt at the side.

At *K*, add $1\frac{1}{2}$ inches to *L*, as the train draws the skirt up at this point, and without this allowance makes it short at this place. Have this line, *C L*, curved in (about 8 inches above the floor line) at *W*, about 2 inches from a straight line from *L* to *V*. This will cause the train to carry better. This completes the regular Princess front.

The dotted lines from the hip dart down are used only when the goods are very narrow. When the goods are narrow, then, make a seam down from the hip dart. *The front line of the hip dart of the waist, springs back regularly to G*. From this on to the bottom at *J* it springs back or to the right *one inch* for each *twelve inches* down. If, then, from *G* to *J* is 36 inches, *J* is 3 inches further from the fold line than *G*. In other words, this line keeps running back slightly from the waist to the floor.

The back line of the hip dart is drafted regularly to *G*, but from this point, where it meets and crosses the front line, it is carried straight down parallel with the fold line in front, or with the grain of the cloth, to the bottom of the skirt at *I*. When the hip dart is continued down with the seam the front at the bottom extends from *H* to *J*, and the underarm piece from *I* to *L*.

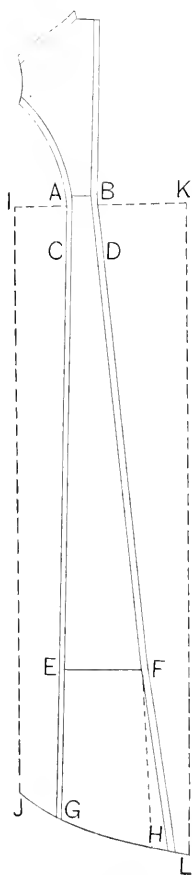


Fig. 20.

HOW TO MAKE THE BACK OF A PRINCESS.

Having arranged the machine for the regular back and marked as usual, we have the back made to 6 inches below the waist line. To extend the skirt continue the center line of the back *B D*, Fig. 20, to the floor at *E*, and continue it on to *H* until it gives you the length of train desired. For the width of this piece at the floor consult the column for width of back, opposite the width of skirt you are making (in this case $2\frac{1}{2}$ yards) in the table for the Princess skirt on page 32, or in the measure book. There you find 9 inches given as the width of this piece at this point, the distance from *F* to *E*, at which point make a dot.

Next place the end of the tape at the waist line at *A*, and at 6 inches down, place it out to the regular spring at the back at *C*, then continue the line down to *E*, and extend beyond *E* the length desired for train to *G*. This line curves slightly over the hip just below *C*. The length of train varies from 2 inches to 2 yards, beyond the floor line of the skirt. The train is shaped after the side body is drafted, and the train part placed as it should go together. Then the edge of *J L*, Fig. 20, and *U Y*, Fig. 21, can be trimmed to suit the style desired.

When you desire the train to be extra full you can throw extra fullness in the center seam from *F* to *H*. This is seldom necessary. When plaits or fullness is desired below the waist you can add as shown by the dotted lines *I J* and *K L*, Fig. 20.

POLONAISE.

THE FRONT

Of the polonaise is made the same as the front of the Princess, just described, except that it is generally 2 inches shorter and does not curve in above *F*, Fig. 19, as would be required for a train. It is generally draped or fuller along the side at *G G*, as shown in Fig. 22. This front can be changed and draped to coincide with the changes of fashion.

THE BACK AND SIDE BODY

Can be drafted separately as for the Princess, or can be placed about six inches apart on the same waist line as shown by *H* and *I*, Fig. 23. The circle lines of the back and those of the side body are continued below the waist line, regularly for 6 inches, and then straight on, until they come together at *J*. This

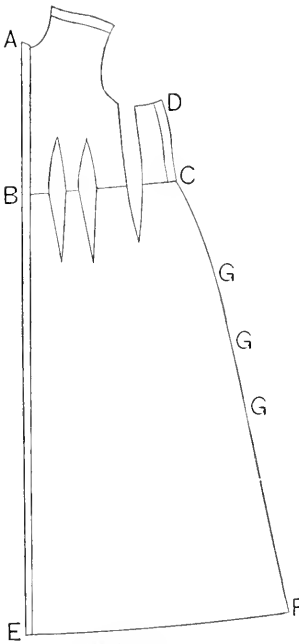


Fig. 22.

makes the skirt of the side body and back in one piece; the center line down the back is continued in a straight line from the waist to within two inches of the floor. The side seam over the hip has been carried down six inches below the waist by the machine. As you continue, for the next 3 inches gradually curve in to a straight line and continue to the bottom of the skirt with the grain of the goods. If plaits or fullness is desired below the waist they can be added in the center of the back from *M* to *N*, and between the side body and the back by increasing the space between them as desired at *L*.

The point below the waist at which the fullness is to be added varies from one-half to 6 inches, according to the fashion. Different drapings will give you as many varieties of styles as you may desire, and this same style of skirt, with back and side body together, is used without draping for various kinds of garments.

Princess, Polonaise, Ulsters, Waterproofs, Dusters, &c., &c., are all made on the same general plan, and the same tables and rules apply to them.

PLAIN OR GORED SKIRT.

Is made with a full breadth of goods in front, one or two pieces on the side, and a full breadth or more in the back. The front and side pieces are gored or tapered at the top. In making this skirt the width of the goods and the size of the figure ought to be taken into account, and from them the number of the pieces and the size of each determined.

A medium sized skirt would be 24 inches at the waist, 41 at the hips, and 2 yards and 4 inches at the floor. For half the skirt, at the floor, we

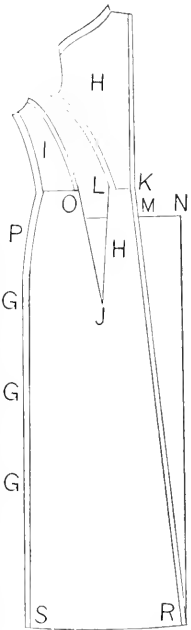


Fig. 23.

would have 38 inches. When the goods are 22 inches wide, the front piece, which is folded, will be 11 inches wide at the bottom, as shown in No. 1, Fig. 24. The length AB is the length of skirt desired, say 38 inches. The top, from A to X you would make $6\frac{1}{2}$ inches wide—about one-fourth the waist size. Draw a straight line from X to C at the bottom of the skirt. At the top of this line you take out a small gore, 1 inch wide, at top, D to X , running out 7 inches below. We also take out a small gore at E , $1\frac{1}{2}$ inches wide at the top and 7 inches deep. This leaves this piece 4 inches at the top when finished.

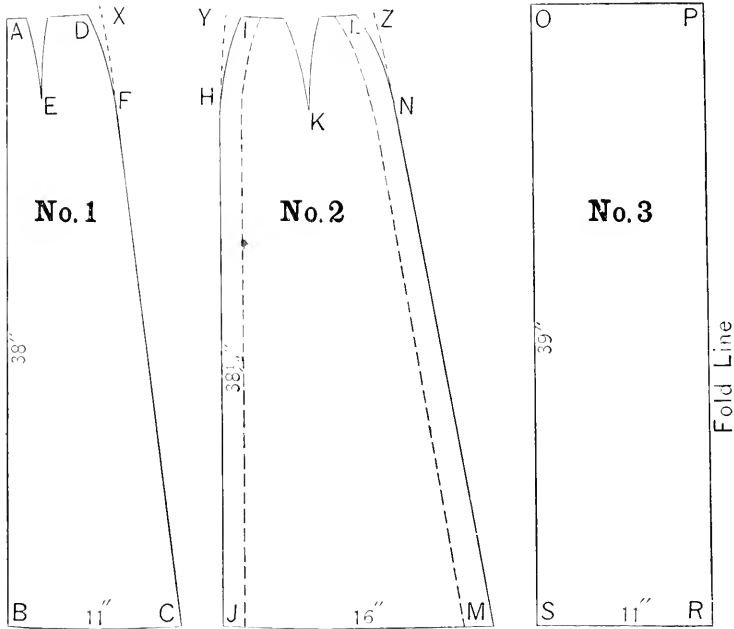


Fig. 24.

Next make the second piece, No. 2, Fig. 23. Make the first line straight—from Y to J , the length of the skirt. Before deciding the width of the bottom of this piece we add the width of the front piece and the width of the back at the floor together, and as they are both folded it will always be equal to one breadth of the goods, which in this case is 22 inches, which, taken from 38, the half of the skirt at bottom, leaves 16 as the correct width for the bottom of this piece. Place a dot at M 16 inches from J , on a line at right angles with the front line YJ . At the top, the width from Y to Z , make a little over one-third the waist size, say 10 inches, and draw line ZM . Take off a small gore from H to I on the front line, 1 inch wide at the top, down to H , 7 inches. Also take off a gore from L to N 1 inch wide at top, down 7 inches to N . Also, take out a gore from the center, 2 inches wide at top, down 7 inches deep, to K . This will leave this piece about 4 inches wide at the top, when finished.

The back piece is generally a straight piece of full-width goods, and is generally gathered on the band to suit. The back piece can be made gored, the same as the front, but this is not often done. If, for any reason, you should use this gored piece on the back, you will need to run a piece of tape over the seams on the inside, where it joins the side piece, as otherwise both pieces being on the bias, they would sag at the seam. *Remember that whenever two bias edges are united in a seam, you can prevent stretching by covering with a tape.*

When the goods used are 24 inches wide, in place of 22, the front and back pieces will each be one inch wider at the floor, and the side piece can be made narrower in proportion, as shown by the dotted lines.

changes just described required for an outside garment, place the front of the machine 3 inches back from the edge of the goods, so as to give the goods required for double breast. Have the waist line the distance from the bottom of the goods or the paper the length of skirt required, about 16 inches; with the machine in this position, mark the neck, shoulder, arm-hole, side seam, waist line, and hip dart *D*, Fig. 25, *but not the front darts*. Dot down the front in the center line from the neck to the waist, and extend the line on to the bottom of the skirt, as shown by *A B C*, Fig. 25. The center line is the narrow slot running from the neck to the waist line in which the screws and rivets slide. It is $\frac{1}{2}$ inch to the right of the fold lines.

At *A*, at the neck at the top of the dotted line, a small gore is sometimes taken out, about $\frac{1}{2}$ inch wide at the top, running down 4 inches, this is to make the lap keep back in its place and fit properly at the neck. Mark from *A* at the neck out to *J*. This line generally goes straight out; fashion, however, controls this as well as the collar.

The skirt of this coat is made the same as the regular basque skirt, except that we measure from the centre line *A C*, 6 inches below *B*, from *X*, across to *Y*, as shown in Fig. 25. When the garment is half tight there will be no darts in front, and the above gives us a half tight garment. See back next page.

TO MAKE A THREE-QUARTER TIGHT.

Make the same as above for a half tight, except that you add *one front dart* as follows: Place the machine as before when you marked the front, then move the machine to the left until the second dart is midway between the center line and the hip dart. Thus mark the dart *E F G*, as shown in Fig. 25. See back for this front on next page.

TO MAKE A HALF TIGHT FRONT WITHOUT ANY DARTS.

Simply arrange the machine as before except the hip dart, which must be shut out at top and bottom, and not marked. The side seam at the top must be moved to the left as far as it will go, that is to *O* on its scale, and the bottom must be set at the waist size, plus the 2 sizes extra allowed for an outside garment. Draft the same as before, except the darts. See the back for this front on next page.

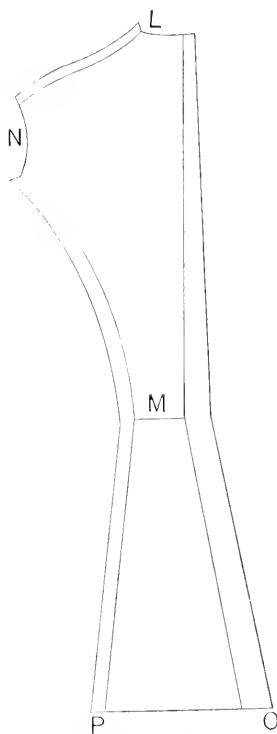
TO MAKE A TIGHT-FITTING FRONT.

Arrange the machine as for the regular basque; increase the neck one size front and back, increase the width of back $\frac{1}{2}$ size for thin, and 1 size for heavy material, increase the width of front 1 size, increase the armhole 1 size for thin, and 2 sizes for heavy material, both front and back, widen the waist and skirt of the back, each 2 fashion sizes, add 2 sizes to the waist in front, shorten the side seam or underarm length of the back, side body and front, each $\frac{1}{2}$ inch; change the circle of the side body, so that they will correspond with the circles of the back.

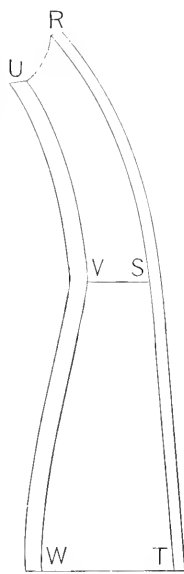
If you want a double-breasted garment place the machine on the goods 3 inches from the edge, and if you want a single-breasted garment place the edge of the machine at the edge of the goods. Have the waist line the distance from the bottom of the goods that you desire the length of the skirt. Mark the center line for double-breasted, or the fold line for single-breasted, neck, shoulder, armhole, side seam, waist line, hip dart, and the two front darts. Add the skirt the same as for a basque. See back for this front on next page.

THE BACK AND SIDE BODY FOR PALETOT OR OUTSIDE GARMENTS.

Set the back as for the regular basque to the measure taken and make the necessary changes for an outside garment as directed, page 35. Draft as before, except the sewing line in the center of the back. This generally extends straight from the waist up to the neck, as shown in Fig. 26.

**Fig. 26.****SIDE BODY.**

Set the machine according to the measure taken and make the side seam and circles each $\frac{1}{2}$ inch shorter as required for outside garments. Draft as before and straighten up the side seam below the waist (see Fig. 27), as this garment is a loose one it does not require so great a curve just below the waist. Continue the skirt down to the length desired. This back and side body can be used with either of the fronts, above described on pages 35 & 36.

**Fig. 27.****SACQUE BACK OR BACK AND SIDE BODY TOGETHER.**

Set the back as for the regular basque and then increase the neck and armhole each 1 size. Increase the width of back $\frac{1}{2}$ size. Increase the width at

waist and skirt 2 fashion sizes. Shorten the lower part of the length of back or underarm length $\frac{1}{2}$ inch, and the side seam and circles of the side body each $\frac{1}{2}$ inch. Mark the back all except the circles. Dot the sewing line of the circles near the armhole and near the waist. Place the side body so that the lines at the armhole and waist are right, and have the *sewing line* of the circles of the side body are over the dots made at the circle of the back near armhole and waist. Mark the armhole and side seam to the waist and continue to the bottom of the skirt. Mark the waist line. This back is not often used but can be used with either of the fronts above given. It is the same as Fig. 15, on page 26, except it is changed to an outside garment.

TO MAKE A FRENCH JACKET.

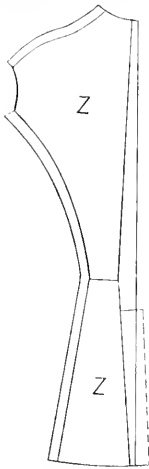
Take a piece off the Sacque Back about 1 inch wide just inside of the side seam, as described in Fig. 17, for a basque on page 27, and add it to the front, as described and shown in Fig. 18, on page 28. The machine must be changed of course for an outside garment.

A TIGHT FITTING COAT WITH CROSS SKIRT.

Arrange the machine according to the measure as for the regular basque, and then enlarge it as follows :

THE BACK.

Increase the neck one size, width of back one-half size for thin, or one size for thick goods. The arm hole one size for thin or two for thick goods. Widen the waist two fashion sizes and the skirt the same.



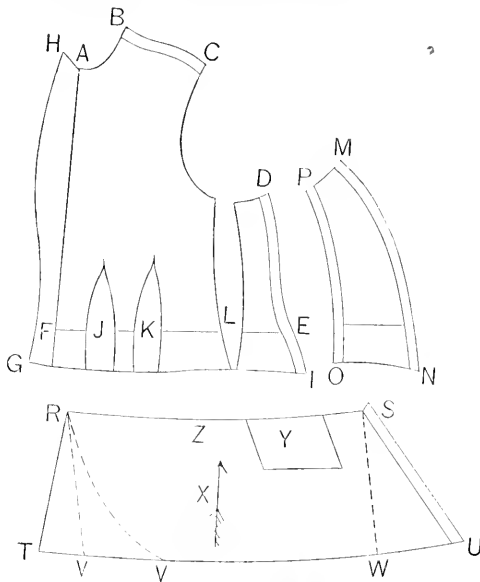
Mark the back as usual all except the seam line down the centre of the back; this is straighter in coats than basques. Have the line nearly straight from the waist line to the neck, unless the back is very round, in this case you must use the curve to fit. The lap in centre seam of the back is shown by dotted line in Fig 28, extend the skirt down the required length say 10 inches.

THE SIDE BODY.

Simply shorten the circles to correspond with the back as changed, and shorten the side seam one half inch. Mark out side and inside as before, and then cut the skirt off below the waist line the required length, $2\frac{1}{2}$ or 3 inches, as shown in Fig 29 by *M N O P*.

THE FRONT.

Fig. 28. Enlarge the front as follows: Increase the neck one size, lengthen the shoulder $\frac{1}{2}$ inch to correspond with the shoulder of the back, increase the armhole one size for thin, or two for thick goods, shorten the side seam one-half inch; increase the waist one size; leave the darts as before; shorten the lower part of the front length one half inch. Place the outer edge to the edge of the cloth for single-breasted or three inches back for double-breasted.

**Fig. 29.**

side seam; this downward slant is continued across the Side Body Skirt as shown by *O N*, Fig. 29.

Mark the same as usual; if double breasted mark the centre line *A P*, Fig. 29, to the right of the fold line one half inch. The front is either straight or curved, as fashion requires. The skirt is added six or eight inches long as before and is then cut off below the waist line to suit the fashion from 2 to 4 inches. In this case we will say 3 inches, as shown by *G L*. The side body is cut off the same length. The line is curved or straight according to fashion; generally it is straight from the front back to the front darts, then curves up $\frac{1}{2}$ inch at the hip dart and down again at the

THE CROSS SKIRT FOR FRONT AND SIDE BODY.

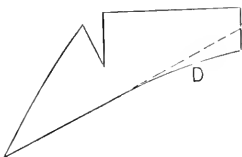
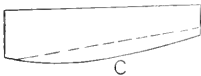
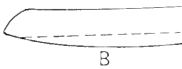
Measure across the skirt of the front and side body where you cut it off 3 inches below the waist line from *G* to *N*; don't include the seams and darts. This will give you the width of the front and side body when made up. Add two inches to this for lap and it will give the required length of the cross skirt at the top, where it joins the front and side body. Now, if the length of the back skirt is 10 inches long the front will want to be the same. We have below the waist line 3 inches, count $\frac{1}{2}$ in. for seam and we have $2\frac{1}{2}$ finished. The cross skirt then will need to finish $7\frac{1}{2}$ inches; to do this it will need $\frac{1}{2}$ inch at top for seam and one or more inches at the bottom, say 9 inches deep. *To draft the cross skirt*: place *R* back from the edge of goods 2 inches. Measure straight across to the right to *S*, the length as just obtained. Curve this line down in the Centre one inch at *Z*, this will give a line to suit the bottom of front, as shown in Fig. 29, but fashion uses curve as well as straight lines across at the top of the cross skirt, that is, adds to the regular skirt at one point, and takes off the cross skirt just as much; so fashion must be your guide here.

The grain of the cloth is shown by *X* the arrow. The depth of the skirt is shown by *R T*, also the spring of the front, when you wish the cloth to meet in front. The lines *R V* represent cut-away fronts, *Y* where to add the pocket, and *S U* the spring where it joins the back. For skirts not over 10 inches long we add half the depth of skirt to get the spring, thus, if it is 8 inches from *S* to *W* it will be 4 from *W* to *U*. This gives plenty of slant; any extra goods at *U* can simply be turned under.

This same plan is used for basque with cross skirts.

THE COLLAR.

THE STANDING COLLAR is slightly curved. Take the back of the machine and mark a line with the circle the length desired; then move the back from the line just made two and a half inches, and mark another line same as before. Cut off one inch longer than half the neck size, shape the left end for the front and the right cut square off for the seam, as shown by *A*, Fig. 30.



THE PLAIN ROLLING COLLAR FOR SINGLE BREAST—see *B*, Fig. 30. It is cut just one inch longer than half the neck size, and one inch wider than it is to be when finished, say three inches. The top is straight, the lower edge slightly curved. The dotted line shows the fold line.

THE WIDE ROLLING COLLAR is made the same as *B*, shown by *C*, Fig. 30. Can be used for double-breasted garments.

THE COLLAR AND LAPEL TOGETHER, is shown by *D*, Fig. 30. It is faced on to the front, which is cut away from the side of the neck to a point five or more inches below the neck on the front line. This will give you the principal styles only.

Fig. 30.

THE SLEEVE.

One of the most important parts of the dress is the sleeves. When they fit badly they are both uncomfortable and unsightly.

To become a good dressmaker you must thoroughly master this part of your trade. Many a good dressmaker has almost ruined her trade by trying to make one pattern do for all her customers. It would be too short on the shoulder for this one, wrinkle across the full part of the arm for that one, draw across the back for another, bind the arm of the next down, and get the elbow in the wrong place, and so on.

To make a sleeve to fit, it is necessary to have the length to the elbow and the wrist, and to have the size at the top and bottom. And if the sleeve is to be tight-fitting it is also necessary to have the size of the arm between the shoulder and the elbow, and at the latter point with the arm bent. To get the size at the wrist, make a fist and measure around over the knuckles.

There is a place in the measure book for each of these measures, and you will do well to take them carefully and draft accordingly.

A plain loose sleeve can be drafted from the length, and size top and bottom. When you use only these three measures you locate the elbow point two inches nearer the wrist than the shoulder—that is, make the upper part of the sleeve two inches longer than the lower part.

The present style requires the sleeve to join the shoulder just at the point. When the armhole is cut higher up on the shoulder, then the top or curve of the sleeve must be extended just as much as the armhole is above the point of the shoulder, and if long shoulders come in style again, take off the top of the sleeve what you add to length of shoulder on the garment.

This Sleeve Table gives THREE inches difference at the armhole.						With ONE inch difference at the Wrist.		
Size of Armhole.	Front Curve.	Back Curve.	High Point.	Width of Under.	Width of Upper.	Size at Wrist, Finished.	Width of Under Piece.	Width of Upper Piece.
10	2 $\frac{3}{4}$	1	4 $\frac{1}{4}$	4	7	6	3	4
11	3	1	4 $\frac{3}{4}$	4 $\frac{1}{2}$	7 $\frac{1}{2}$	7	3 $\frac{1}{2}$	4 $\frac{1}{2}$
12	3 $\frac{1}{4}$	1 $\frac{1}{4}$	5	5	8	8	4	5
13	3 $\frac{1}{2}$	1 $\frac{3}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{2}$	8 $\frac{1}{2}$	9	4 $\frac{1}{2}$	5 $\frac{1}{2}$
14	3 $\frac{3}{4}$	1 $\frac{1}{2}$	5 $\frac{1}{2}$	6	9	10	5	6
15	4	1 $\frac{1}{2}$	5 $\frac{3}{4}$	6 $\frac{1}{2}$	9 $\frac{1}{2}$	11	5 $\frac{1}{2}$	6 $\frac{1}{2}$
16	4 $\frac{1}{4}$	1 $\frac{3}{4}$	6	7	10	12	6	7
17	4 $\frac{1}{2}$	1 $\frac{3}{4}$	6 $\frac{1}{4}$	7 $\frac{1}{2}$	10 $\frac{1}{2}$	13	6 $\frac{1}{2}$	7 $\frac{1}{2}$
18	4 $\frac{3}{4}$	1 $\frac{3}{4}$	6 $\frac{1}{2}$	8	11			
19	5	2	6 $\frac{3}{4}$	8 $\frac{1}{2}$	11 $\frac{1}{2}$			
20	5 $\frac{1}{4}$	2	7	9	12			
21	5 $\frac{1}{2}$	2 $\frac{1}{4}$	7 $\frac{1}{4}$	9 $\frac{1}{2}$	12 $\frac{1}{2}$			

In using the above table, find the armhole you are using in the left column, and opposite this, on the same line, the other parts you need to complete the sleeve.

Remember to get from the measure book the

Length of sleeve,

" to the elbow,

Size at armhole,

" hand.

TO DRAFT THE SLEEVE.

Draw line 1 the length that the sleeve is to be from *A* to *B*. Get this from your measure book. Also the distance to the elbow, and measure from *A* to *C*. In case you have not got the measure to the elbow point, make the upper part one inch more than half the length of sleeve; thus, if sleeve length is 20, make the upper part from *A* to *C* 11. Then get the front curve of the armhole as found in the table opposite the arm size you are

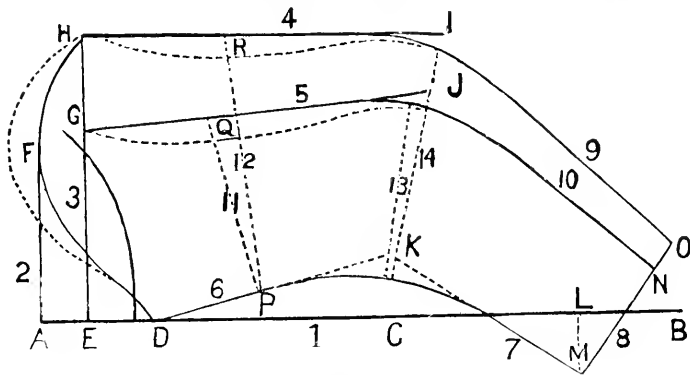


Fig. 31.

using and measure from *A* to *D* the distance. Then get the back curve from the table opposite the armhole size and measure from *A* to *E* the distance.

Draw line 2 at a right angle with line 1 from *A* to *F*, the highest point of the armhole, as found in the table opposite the armhole size.

Draw line 3 at a right angle with line 1 from *E* to *G*, the width of the under piece at the shoulder, as found in the table opposite the arm size. Continue this line 3 inches more to *H*, so that the distance from *E* to *H* is the width of the upper piece, as given in the table opposite the arm size.

Draw line 4 parallel to line 1 and at a right angle with line 3 from *H* to *I* the length to the elbow according to the measure book or the same length as *A C* on line 1. Then place a dot two inches below *I* at *J* the elbow point for the under piece.

Draw line 5 from *G* the width of the under piece at the armhole to *J* at the elbow. Then two inches above *C*, on line 1, dot at *K*, for the inside curve.

Draw line 6 from *D* on line 1 to *K*. Then on line 1, three inches to the left of *B* place dots *L*. Next place a dot 2 inches below *L* at *M* for the inside of the sleeve at the wrist.

For coats use 1 inch from L to M; this will give less curve.

Draw line 7 from line 6 with the side body of the drafting machine. Have the narrow circle from you, place the curved point so it touches line 6 two inches to the left of *K*. Bring the long straight part up so that the outer edge touches *M*; mark along this edge.

Draw line 8 at a right angle with line 7 from *M* to *O* the width of the upper piece at the wrist, as found in the table opposite wrist size. Dot at *N* one inch this side of *D* for the under piece. The width of these pieces is also found in the table.

Draw line 9 from line 4 at the elbow of the upper piece to the wrist, with the circle of the side body by placing the curved point so it touches line 4,

from one to two inches to the left of I. Bring the straight part, which joins the circle, to O. Mark along the edge from line 4 to O.

Draw line 10 from line 5, the outside of the elbow of the under piece, to N. Mark with the circle of the side body as you marked line 9, by placing the point two inches to the left of J. Mark from line 5 to N.

To get the curve of the under piece at the armhole use the side body.

Place the point of the circle of the side body at G on line 3, and bring the outer edge of the straight part to D. Mark the inner edge of the circle and it will add one-half inch at G and D for seam.

To get the curve at the top for the upper piece.

The curve for the upper piece at the armhole is from H to F, and then down to D; have it broad at F and not sharp. The better plan is to mark a line about 3 inches at F one inch to the right and two to the left slightly curved, then extend this line down to H and down to D.

To make the sleeve tight-fitting, use the test lines 11 and 12 for the upper part, and 13 and 14 at the elbow. That is, measure the sleeve at these points, and if they exceed the measure from the measure-book more than two inches, take out the extra goods at R and Q for the upper part, and I and J at the elbow. Shape as shown by the dotted lines 4 and 5.

Extra fullness on the top of the shoulder or a puff is made by the curve of the upper piece beyond F, Fig. 31.

For a very short shoulder the top of the sleeve must be extended at this point. Add to the curve as you shorten the shoulder.

A straight or curved sleeve can be made by simply changing the distance from M to L. When M is one inch from L the sleeve curves about right for a coat-sleeve, and when it is two inches more suitable for a basque.

To make a slight fullness at the elbow draft as instructed above. Measure the lines 4 and 9 to get the length desired and cut off the extra goods at the wrist both upper and under even. The upper piece being some longer than the under, the extra length is fullness in at the elbow in a space of two inches.

When no fullness is desired at the elbow, measure lines 4 and 9 to get the length required, then measure lines 5 and 10 and make the under piece one-half inch shorter than the upper.

This completes the plain sleeve.

TO MAKE A NARROW UNDER AND A WIDE UPPER.

Draft the sleeve just described as shown in Fig. 31, according to the measures and the table as explained. Then take a piece off the under part of the sleeve, the width desired, and add it to the upper. This piece can be varied in width, but the following proportions are good. Three inches off the under piece back of the arm at the armhole, from G to S one and

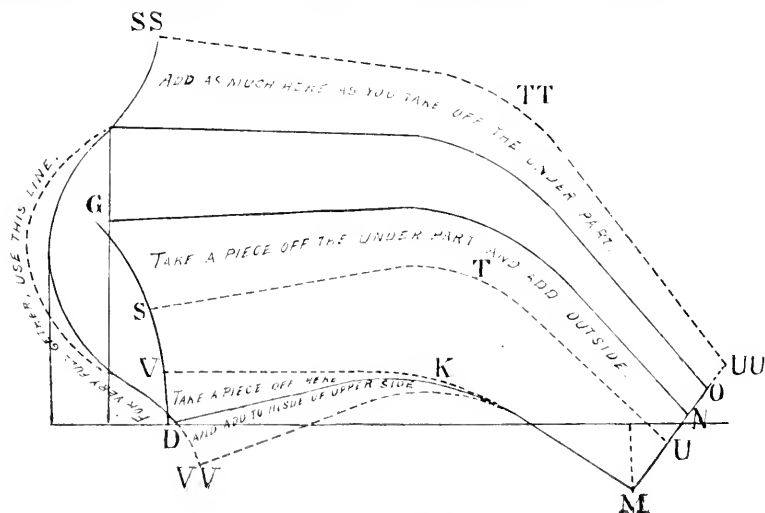


Fig. 32.

one-half at the elbow at *T* and one inch at the wrist from *N* to *U*. This piece or rather the same amount must be added to the upper piece as follows: 3 inches at the armhole to *SS*, at elbow $1\frac{1}{2}$ inches at *TT*, and one inch at wrist from *O* to *UU*.

Sometimes a small amount is taken off the front part as well as the back of the under piece as shown by *VK*. This piece can be one inch at the armhole and run out at *K*, at the elbow inside. Add from *D* to *VV* just as much as you take off and continue to point at *K*. See that the curves from *VV* and *SS* are joined and continue as shown in Fig. 32.

TO MAKE A SLEEVE WITHOUT THE BACK SEAM FROM THE ELBOW TO THE SHOULDER.

Draft the sleeve as shown in Fig. 31, page 41. Take off the under piece with the wheel, then lay the upper and under pieces with the two back edges together (lines 4 and 5, Fig. 31), so they lap one inch. Have them so the armhole continues smoothly at the top. Mark around the outer edge and the gore at the elbow.

FOR A SHORT SLEEVE, cut off 3 or 4 inches below the elbow.

Remember that in putting the sleeve in that the highest point of the sleeve goes to the highest part of the armhole.

CIRCULARS AND CAPES.

These wraps are cut in a variety of styles and shapes, but are all made on the following simple plan. The front and back of the basque are placed so as to form the shoulder-seam and give the goods required over the arm.

Set the machine as you would for a basque, increase the neck and width of the back each one size, and the neck of the front one size, make the shoulder of the front the same length as the shoulder of the back.

Place the edge of the front of the machine back one inch from the edge of the goods and nine inches from the top, as shown by distance *AO*, Fig. 33.

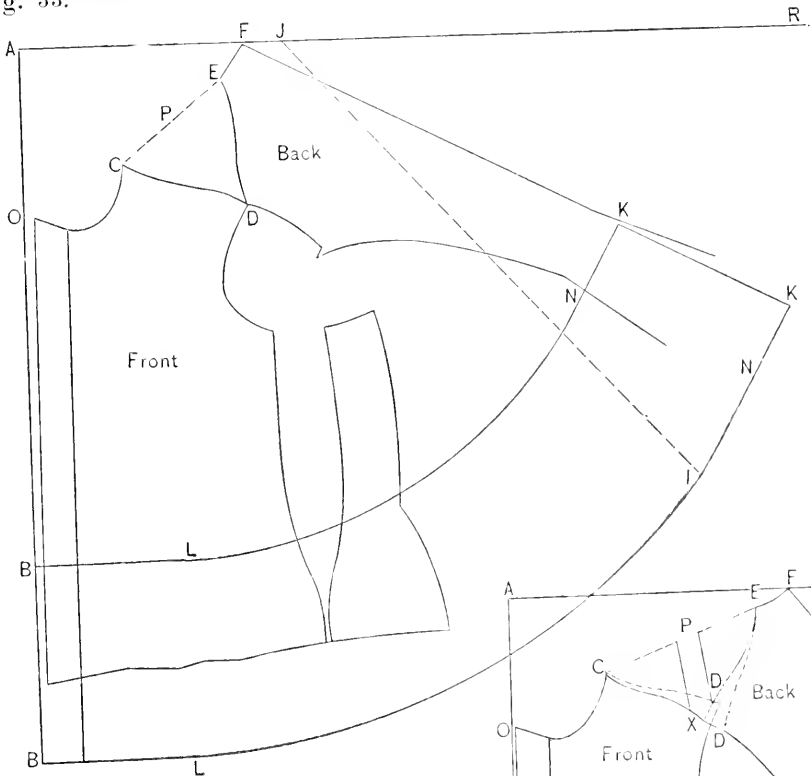


Fig. 33.

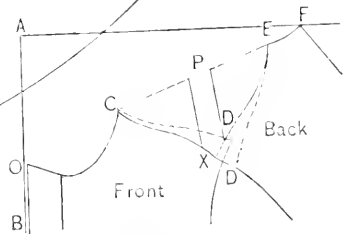


Fig. 34.

Next place the back so the seam lines of the shoulders of the front and back come together at the armhole at **D**, Fig. 33. With this point as a pivot move the back, until the center line **FK** has the direction required. The angle here given to line **FK** gives you a medium amount of fullness in skirt. If it is moved to the dotted line **IJ**, which is nearly a full bias, it will give less goods and make a close-fitting skirt. To make a close or loose hanging garment then simply change the position of the center line of the back.

To get the length, measure the front or back which ever you have, then draw a line straight in from **B** or **K** the distance **P** is from the center line of the front or back. Next place the end of the tape at the center of the shoulder gore at **P** and make a sweep from **N** to **L** for lower edge.

When you want the seam on top of the shoulder add one and a half inches (not size) to the armhole of the back, that is raise the shoulder at this point that amount. And take off of the armhole in the front the same amount added to the armhole of the back, as shown in Fig. 34. The shoulder lines come together then at **X** in place of **D** as in Fig. 33. The back and front are placed the same, and the skirt made the same.

THE SIDE SEAMS ARE USED IN PLACE OF THE ONE DOWN THE CENTER OF THE BACK.

When this is desired the pattern is made the same as Fig. 34, but the goods are folded on the center line of the back and the shoulder seam continued over the shoulder straight down to the bottom.

TO HAVE TWO SHOULDER GORES, simply have a strip of goods one and one half inches wide in the center of the large gore from **P** to **X** as shown in Fig. 34. This gives you two small gores **CXP** and **PDE** allow for seams.

These illustrations will give you the general plan, a little practice will enable you to follow any fashion.

THE DOLMAN

Has a variety of styles and can be produced in several ways. The simplest and perhaps the best plan is to set the machine according to the regular basque measure, increase the neck one size and draft the front and back, then change these, as required to suit the different styles and add the sleeve to suit the fashion. To assist in making these changes it is well to have the following

TEST MEASURE.

1ST MEASURE.—With the arm bent at right angle, and the hand resting upon the pit of the stomach with the arm in an easy position at the side measure from the center of the back, at the height of the elbow straight around over the arm to the little bone on the wrist; add *two inches* for seams and comfort.

2D MEASURE.—Measure from the center of the back from a point *six inches* below the neck straight around over the arm to the armhole seam in front. Add *two inches* for seams and comfort.

Set the machine according to the regular measure. Increase the neck one size, and

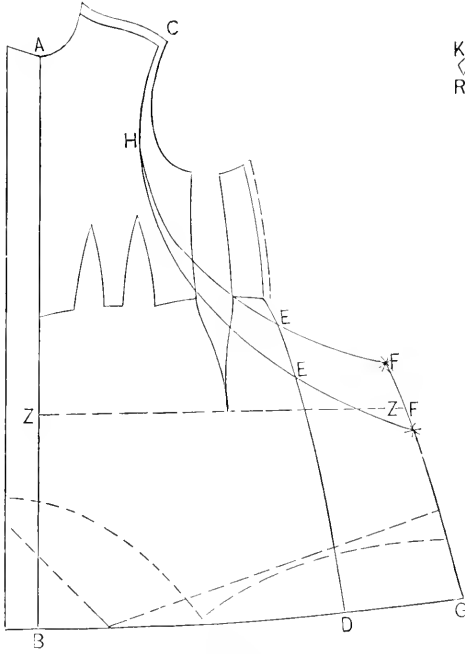


Fig. 35.

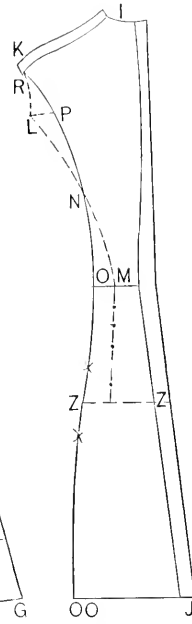


Fig. 36.

DRAFT THE FRONT AS FOLLOWS:

Place the edge of the machine even with the edge of the goods and have the waist line above the lower edge the required length of skirt. Then mark the fold line, neck, shoulder, armhole, side seam and waist line. Do not mark the darts, but dot the hip dart at the waist line.

Extend the fold line down below the waist, as shown in Fig. 35 to the length desired. Extend the skirt from the side seam down according to the regular hip measure as found in the table in the measure book and as shown by line *ED*, Fig. 35.

It is not, however, necessary to draft this line, unless we cut a piece off the side body and add it to the front, which we seldom do. So we can proceed at once to get line *FG*.

Take half the full hip measure, and apply it across the skirt *six inches* below the waist line, from *Z* on the fold line to *Z* on line *F'G*. Add *one inch* to complete the length; that is, use $\frac{1}{2}$ the hip measure plus *one inch*. Thus, if the hip measure is 42, the $\frac{1}{2}$ is 21, to which adding 1 inch, we have 22 inches, the length required from *Z* to *Z*.

Have the line *F'G* spring to the right at the rate of *two inches* for each *six inches* it is continued below *Z*; thus if *G* is 12 inches below *Z*, then the line *B'G* will extend 4 inches further to the right than the line *ZZ*.

The width of the skirt of the front as here given is based on the usual width of the skirt of the back, which is 4 inches wide at 6 inches below the waist line from *Z* to *Z*, Fig. 36. Just as much as the width of the back at this point exceeds 4 inches, you will deduct that amount from the width of the skirt in front on line *ZZ*, making it that much narrower.

To finish the front we cut away that part or portion of the front not required for the Dolman. Begin at the shoulder at **C**, Fig. 35, at $\frac{1}{2}$ inch inside the armhole and continue that distance inside the armhole on down to **H**, which is a little above the lower part of the armhole. From **H**, spring back to the right and cross the waist line near the dot at the right side of the hip dart and extend it to **P'** 2 inches above **Z**. When a lower cut is desired, strike **P'** below **Z** by crossing the waist line near the left dot of the hip dart in place of the right as shown in Fig. 35.

THE BACK.

Place the back on the goods so there will be room to add the sleeve at the left. Then mark all the back except the armhole and circles. Then dot these on the sewing lines as shown in Fig. 36. Next dot at **K** on the shoulder $\frac{1}{2}$ inch in from the armhole and at **P**, $1\frac{1}{2}$ inches inside of **L**, the sewing line of the armhole, and at **N**, the point where the curved line crosses the circle about $\frac{2}{3}$ of the distance on the circle from the waist up, also at **O**, at the waist, which is 2 inches to the left of **M**, the width of the back at the waist line.

Draw the curved line from **K**, through **P** and **N** to **O**. See that this line has a graceful curve. Extend the skirt on down, the length desired, keeping $1\frac{1}{2}$ inches to the left of the regular basque skirt, 6 inches below the waist line at **Z**, and on to **O O**. This line curves slightly from the waist to the bottom. Finish the back by drawing a line across the bottom of the skirt as shown in Fig. 36.

THE SLEEVE.

After drafting the back as just described and shown in Fig. 37, take a plain basque sleeve to suit the arm size and place the top of the back seam

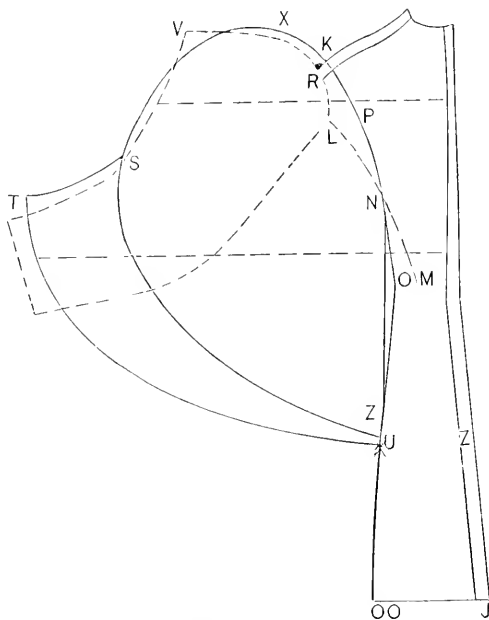


Fig. 37.

at **L**, the armhole of the back, Fig. 37, and stick a pin at this point. Then with this point as a pivot move the sleeve so the curve of the armhole of

the sleeve joins the curve of the armhole of the back at *R*, on the dotted line.

With the sleeve in this position, dot all around it. Then stick a pin at *S*, the inside curve of the sleeve, and take the one at *L* out and using the pin at *S*, as a pivot move that part of the sleeve at the wrist up to *T*, locating *T* at about the same height as *S*. Then mark from *T* to *S*, and continue toward *F*, to within 3 inches thereof. From this point continue the curve on to *K*, keeping inside of *F*, about 1 inch, and outside of *X*, $\frac{1}{2}$ inch. That is, we take off the point at *F*, and extend the curve at *X* beyond the regular sleeve curve $\frac{1}{2}$ inch, or as much as we shortened the shoulder at *K*. In other words, we must add to the sleeve at this point as much as we take off at the shoulder.

That part of the sleeve which joins the back has the same curve as the back from *K*, through *P* to *N*, from which point the sleeve continues on down in a straight line to *Z*, 6 inches below the waist line, and then on to *U* the length desired. It generally continues on down the back to a point 2 inches below where the skirt of the front joins the back. The shape of the sleeve from *T* to *U* varies according to fashion. Sometimes it is a regular curve from *T* to *U*, at others it is carried straight down from *T* and straight across from *U*.

The under part of this sleeve is the same from *T* to *S*. From *S* it can be a regular curve to *U*, the same as the curve of the front from *H* to *F*, Fig. 35.

In sewing in the sleeve, the highest point of the sleeve goes to the highest point of the armhole. This brings point S of the sleeve to point H of the front.

From *H* to *F* on the front, Fig. 35, and from *S* to *U* on the under part of the sleeve, Fig. 37, are sewed together, and a piece of tape stitched over the seam.

The under part of the sleeve need not extend all the way from *S* to *U*. It can stop $\frac{1}{3}$ of the way if desired. The lower edge of the under piece is the same as the lower edge of the outside piece, and completes the sleeve as shown in Fig. 37. The lower edge of this sleeve is open.

Apply the test measures first from the center of the back to *T*, and then the second measure from the center of the back through *R* to a point a little above *S*. This completes the open sleeve.

When you desire a sleeve closed along the lower edge.

The front and back are drafted just the same, and the sleeve is made the same but is shaped differently at the bottom as is seen in Fig. 38. Draw a line straight out to the left from *U* to *Y* the lower edge of the sleeve, and a line straight down from *T* to *Y*, this gives the lower edge of the outside piece. To get the under part of the sleeve fold the paper on line *Y U* across the bottom, shape the end from *Y* to *T*, and *T* to *S* the same as the outside curve from *S* to *U*. This makes the sleeve all in one piece as the goods are folded on the lower edge thus saving the seam there. The test-measure can be applied the same as before.

This is the favorite sleeve for winter wear.

TO HAVE THE BACK AND SLEEVE ALL IN ONE PIECE.

Make the front the same as before shown, Fig. 35, and described on page 45.

Make the back the same as before shown, Fig. 36, and described on page 45.

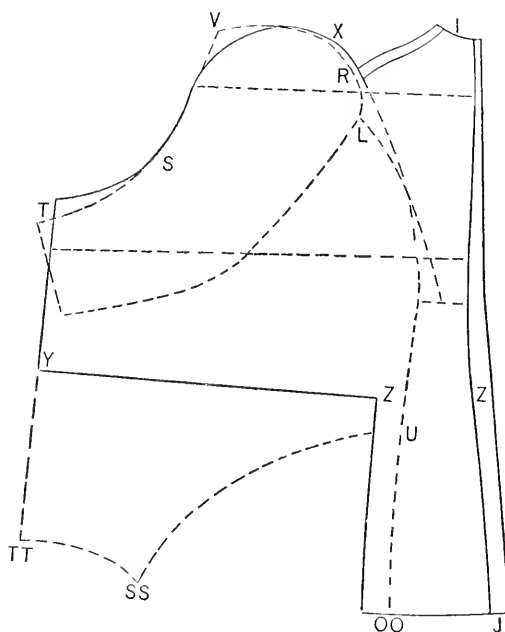


Fig. 38.

The sleeve is added just the same way but the back and sleeve are cut all in one piece, that is the seam joining the sleeve to the back is done away with.

Cut the sleeve to suit the fashion. The closed sleeve just described and shown in Fig. 38 is very suitable for this style of back and sleeve in one.

These samples will serve to give you a good idea of the Dolman, but to master it will require some practice as it is considered by some the most difficult garment to make.

HOW TO GET THE QUANTITY OF GOODS REQUIRED.

This table gives the quantity of material required to make the following garments, medium size, for different widths of goods.

The figures on the lines opposite the name of the garment, is the number of yards required to make it. At the top of each column is marked the width of the goods. So to get the quantity of material for different widths you have only to look in the different columns.

To use the table find the style of goods in the first column, go out to the right to the column marked with the width of the goods you want and there is the amount required.

The table is based on 36 inches bust measure, and medium figure, and will be near enough right to be used for 34, 36, 38 without change. When, however, there is much deviation in size from the 36 bust, you can add or take off a little as your judgment suggests.

AMOUNT OF MATERIAL FOR DIFFERENT GARMENTS.

STYLE OF GARMENT.	DIFFERENT WIDTH OF GOODS IN INCHES.						
	18	20	22	24	27	36	48
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Belt Waist.....	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1
Sack ".....	5	4 $\frac{1}{2}$	4	3 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{3}{4}$	1 $\frac{3}{4}$
Basque with 9 in. skirt.....	6 $\frac{1}{2}$	5 $\frac{1}{2}$	5	4 $\frac{1}{2}$	4	3	2 $\frac{1}{2}$
" " 12 " ".....	6 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	4 $\frac{5}{8}$	4 $\frac{1}{4}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$
Polonaise, short.....	8 $\frac{1}{2}$	7 $\frac{1}{2}$	7	6 $\frac{1}{2}$	5 $\frac{3}{4}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$
" medium.....	9 $\frac{3}{4}$	8 $\frac{1}{2}$	8	8 $\frac{1}{2}$	6 $\frac{1}{2}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$
Princess Wrapper with 6 in. train.....	12 $\frac{1}{2}$	11	10	3 $\frac{1}{4}$	8	6	4 $\frac{1}{2}$
" " 10 " ".....	15 $\frac{1}{2}$	13 $\frac{1}{2}$	12 $\frac{1}{2}$	11 $\frac{1}{2}$	10 $\frac{1}{2}$	7 $\frac{3}{4}$	5 $\frac{3}{4}$
A Princess with full train.....	19 $\frac{1}{2}$	17 $\frac{1}{2}$	16	14 $\frac{1}{2}$	13	9 $\frac{3}{4}$	7 $\frac{3}{4}$
Coat, medium.....	5 $\frac{1}{2}$	5	4 $\frac{1}{2}$	4	3 $\frac{2}{3}$	2 $\frac{3}{4}$	2
" long double breasted.....	6 $\frac{1}{2}$	6	5 $\frac{1}{2}$	4 $\frac{5}{8}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{3}{4}$
Cape or Wrap, short.....	3	2 $\frac{3}{4}$	2	2 $\frac{1}{4}$	2	1 $\frac{3}{4}$	1 $\frac{1}{2}$
Wrap, medium.....	6 $\frac{1}{2}$	5 $\frac{1}{2}$	5	4 $\frac{1}{2}$	4	3	2 $\frac{1}{2}$
Cloak or Long Wrap.....	8 $\frac{1}{2}$	7 $\frac{1}{2}$	7	6 $\frac{1}{2}$	5 $\frac{3}{4}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$
Dolman, short.....	5	4 $\frac{1}{2}$	4	3 $\frac{1}{2}$	3 $\frac{1}{2}$	2	1 $\frac{1}{2}$
" medium.....	5 $\frac{1}{2}$	5	4 $\frac{1}{2}$	4	3 $\frac{2}{3}$	3	2 $\frac{3}{4}$
" long.....	6 $\frac{1}{2}$	5 $\frac{1}{2}$	5	4 $\frac{1}{2}$	4	3	2 $\frac{1}{2}$
Suit, plain.....	14 $\frac{1}{2}$	13 $\frac{1}{2}$	12	11	9 $\frac{1}{2}$	7 $\frac{1}{2}$	5 $\frac{1}{2}$
" medium.....	17 $\frac{1}{2}$	15 $\frac{1}{2}$	14	12 $\frac{1}{2}$	11 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$
" fancy.....	19 $\frac{1}{2}$	17 $\frac{1}{2}$	16	14 $\frac{1}{2}$	13	9 $\frac{1}{2}$	7 $\frac{1}{2}$
Skirt, plain.....	9 $\frac{3}{4}$	8 $\frac{1}{2}$	8	7 $\frac{1}{2}$	6 $\frac{1}{2}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$
" fancy.....	12 $\frac{1}{2}$	11	10	8 $\frac{1}{2}$	8	6	4 $\frac{1}{2}$
Overskirt.....	7 $\frac{1}{2}$	6 $\frac{3}{4}$	6	5 $\frac{1}{2}$	5	3 $\frac{1}{2}$	2 $\frac{3}{4}$
Sleeve, plain.....	1 $\frac{1}{2}$	1 $\frac{1}{4}$	1	1	1	1	1
" fancy.....	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1

GIRLS' AND MISSES'.

A girl 7 years of age, requires

For plain costume.....	4 yards of 22 inch goods.
" fancy ".....	7 $\frac{1}{2}$ " " "
" cloak ".....	3 " " "

A miss 14 years of age, requires

For Ulster.....	2 $\frac{1}{2}$ yards of goods 48 inch.
" medium costume.....	8 " " 22 "
" fancy ".....	10 " " 22 "

Plaiting, ruffling and shirring, as a rule, require three times the length you desire them to be when finished.

HOW TO FIND THE QUANTITY OF MATERIAL IN A MADE UP GARMENT.

Find the number of square inches in each piece of the garment and add them together. This will give the number of square inches; to get the number of yards, divide this amount by the number of square inches in a yard of goods the width you require.

To do this, take the average width and length of each piece in inches. Multiply them together and you will get the square inches in each piece. Add the inches in the several pieces together.

When you measure plaits, folds or ruffles made up, take three times the square inches they contain, as they will require three times the amount of goods to make them up.

In reducing the total amount of square inches to yards, always multiply 36 inches by the width of the goods. If the material is 20 inches wide you have $36 \times 20 = 720$ in each yard. And if the whole number of inches were 10,800, by dividing that by 720, gives 15 yards; one yard in every 10 is added for loss, which added to 15, makes 16½ yards of 20 inch goods. You can make a very close measure with a little care.

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